An Economic Report to the Governor of the State of Tennessee

On The State's Economic Outlook

January 1990

AN ECONOMIC REPORT TO THE GOVERNOR OF THE STATE OF TENNESSEE

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Prepared by the
Center for Business and Economic Research
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FOREWORD

This volume, the fifteenth in a series of annual reports entitled *An Economic Report to the Governor of the State of Tennessee*, has been compiled in response to requests by state government officials for assistance in achieving greater interdepartmental consistency in planning and budgeting efforts sensitive to the overall economic environment. Provided in the 1990 report are both short-term or business cycle-sensitive forecasts and longer-term or trend forecasts.

The quarterly state forecast through the third quarter of 1991 and annual forecasts through 1998 represent the collective judgement of the staff of the Center for Business and Economic Research, College of Business Administration, at The University of Tennessee, Knoxville, in conjunction with the Quarterly and Annual Tennessee Econometric Models. The national forecasts were prepared by the Wharton Econometric Forecasting Associates (The WEFA Group) in Bala Cynwyd, Pennsylvania. The quarterly U.S. forecast was released in September 1989 and the annual U.S. forecast is current as of September 1989. Tennessee forecasts, current as of November 1989 (annual) and September 1989 (quarterly), are based on an array of assumptions, particularly at the national level, which are described in Chapter 1. Chapter 2 provides detailed evaluations for each major sector of the Tennessee economy, and Chapter 3 presents the long-run forecast and outlook for the state. Chapter 4 provides a discussion of Tennessee and the international economy, particularly as concerns the EC 92. Forecast and historical data used in the text are contained in Appendices 1 and 2.

The primary purpose of this annual volume--published, distributed, and financed through the Tennessee State Planning Office--is to provide wide public dissemination of the most current possible economic analysis to planners and decision makers in the public and private sectors.

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and

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EXECUTIVE SUMMARY

The 1980s have seen unprecedented swings in inflation, the deepest recession since the Great Depression, budget and trade deficits of historically unprecedented levels, the U.S. shift from the largest creditor nation in the world to the largest debtor nation, a doubling of the national debt, and the longest economic expansion since World War II.

Several of these factors have had considerable importance for the national and Tennessee economies. In the case of the 1982 recession, its depth left a legacy of reduced family incomes, higher poverty rates, damaged economic status of historically disadvantaged groups, and decreased job opportunities in the traditionally high-paying manufacturing sector. While economic growth will overcome these setbacks in time, they remain noticeable as we head into the 1990s.

A hallmark of the economic structure of the major world economies during the 1980s has been the increasingly global nature of markets. Along with this has come a deterioration in the United States' balance of trade with foreign countries. The decade began with a merchandise trade deficit of $25 billion in 1980 and grew to a peak of $160 billion in 1987 before retreating to the current range of $100 billion. The trade deficit has caused a number of economic dislocations and opportunities that are likely to persist into the 1990s. However, these dislocations and opportunities are not uniform across industries and have the potential to generate considerable economic disruptions. To the extent that Tennessee is dependent on import-vulnerable industries for employment opportunities, the risk of job loss to imports is likely to remain quite high during the 1990s.

During the 1980s significant changes occurred in federal fiscal policy that not only affected the economic climate during the past decade, but will also be felt during the 1990s. Specifically, beginning with the 1981 federal tax cuts, the federal budget deficit began to skyrocket. The large tax cuts were predicated upon the notion that income tax revenues would rise with reduced rates. While this idea was widely discredited by economists, it proved to be a politically popular vehicle for tax reductions. In the years immediately following the tax cut, it was argued that the large budget deficits were the result of the weak economy of the early 1980s. Accordingly, once the economy began to grow, it was argued that the deficit would be eliminated. Now, after economic growth for seven years and a sustained budget deficit still well over $100 billion, it has become clear to even the most casual observer that the federal budget deficit is *structural* rather than *cyclical.* Economic growth simply will not, in the foreseeable

future, eliminate the federal budget deficit. Moreover, despite the hoopla that surrounded the passage of the Gramm-Rudman-Hollings Balanced Budget Act, the baseline policies necessary to achieve a balanced budget have not been put in place.

The policy options available to address the structural budget deficit are by this time almost as well known as they are unpalatable: (1) raise taxes; (2) abandon the goal of a full-employment balanced budget (by repealing GRH); (3) sharply curtail the growth in defense expenditures; (4) continue to move various expenditures (such as the savings and loan bailout) off budget; (5) continue to sell government-held assets; and/or (6) continue to make deep cuts in discretionary nondefense programs. While some combination of these federal policy options seems most likely, virtually all the options will take time to unfold, and as a result federal fiscal policy will remain "exposed" as we head into the 1990s. The clear consequences of this exposure will be a reduced ability to respond at the federal level to national economic downturns and continued reductions in federal aid to state and regional economies.

Over the past decade, U.S. financial markets have been characterized by periods of volatile growth which have been at least partially the result of increased foreign participation in these markets. At the same time, America's banking industry and other financial institutions have been largely restructured, resulting in new opportunities for some institutions and the demise of others. This volatility has greatly affected the stability, organization, and earnings of those domestic firms which continually look to these markets and institutions as a source of capital.

A review of the current national economy indicates that 1989 was a year of modestly reassuring economic performance. For the year, real GNP growth should be just under 3.0 percent. While this is down from the 4.4 percent growth of 1988, this growth rate has certainly been sufficient to extend the current economic expansion through 1989. Other aggregate indicators of the economic health of the U.S. economy in 1989 are also likely to be modestly encouraging.

There is nothing ominous in the aggregate economic statistics, but a more detailed examination of the components of economic activity provides very mixed signals for the period beyond 1989. For instance, the economic expansion that since 1983 has been fueled by robust growth of consumer expenditures has recently experienced some softness.

Because consumer spending constitutes roughly two-thirds of all economic activity, the continuation of the current economic expansion will depend vitally on the performance of consumer spending during 1990 and beyond. While it would be premature at this point to claim that a downturn of consumer spending is imminent, the teeter-totter performance during 1989 raises questions about the robustness of consumer spending as we head into the 1990s.

Similar "vulnerabilities" of other major components of GNP also surfaced during 1989. In light of these considerations, the expectation is that real economic growth, as reflected by changes in the inflation-adjusted GNP, will be a very modest 2.0 percent in 1990. While our expectation is for this modest growth, the possibility of continued weakness in consumer spending, investment and international trade cannot be ruled out. Under such a scenario 1990 would experience a mild recession. For the subsequent years of 1991 and 1992, we expect a modest increase from 1990 levels, with GNP growth rates of 2.5 to 3.0 percent.

Tennessee Short-Term Outlook

Tennessee has suffered slow economic growth during 1989. Seasonally adjusted, nonagricultural employment was lower in September 1989 than at the beginning of the year, falling from 2,086,900 jobs in January to 2,080,900 jobs in September. This compares with growth in U.S. nonagricultural employment of 1,700,000 jobs during this same time period. Adjusted for inflation and seasonal patterns, sales fell during this period as well, from just over $2.8 billion in January to just under $2.8 billion in September.

Slow growth in Tennessee has resulted from four weaknesses in Tennessee's economy. Three sectors, manufacturing, federal government, and construction, have endured sluggish performance. Fourth, several of Tennessee's metropolitan areas have experienced less dynamic growth than in the recent past. These weaknesses have spilled over into other sectors of Tennessee's economy, resulting in a broadly-based slowdown.

As this report was prepared during the third quarter of 1989, growth rebounded somewhat. Tennessee nonagricultural employment increased by 0.4 percent at a seasonally adjusted annual rate (SAAR), and inflation-adjusted sales increased at a 3 percent SAAR.

This mixed economic progress during the first three quarters of 1989 clouds Tennessee's outlook. The declines experienced recently suggest a

very sluggish economy for 1990, and an economy that could fall into recession at any time. However, the third quarter growth in Tennessee, as well as healthier growth at the national level, suggest some underlying strength in Tennessee's economy. Combined, these events paint a slow-growth scenario, but no recession, for Tennessee's short-term outlook. Employment growth in Tennessee will be closer to the national average in 1990 than in 1989, since the U.S. growth is slowing. Tennessee employment growth is expected to average 0.7 percent in 1989, and only a small acceleration to 0.9 percent is expected for 1990. Correspondingly, real personal income growth is forecast at 2.6 and 1.3 percent in 1989 and 1990, respectively, compared with 3.5 percent growth in 1988. Inflation is expected to increase slightly from the 3.9 percent rate of 1988, to 4.7 percent in 1989 and 4.5 percent in 1990. More rapid price increases will keep nominal income growth almost constant in 1989, at 7.4 percent, which parallels the 7.6 percent growth of 1988. However, nominal income growth will decrease to 5.8 percent in 1990. While positive growth is anticipated in 1990, this scenario relies on the assumption that both state and national economic performance do not deteriorate further than our description. If the national economy weakens more than anticipated, a recession in Tennessee could occur in 1990.

Tennessee Long-Term Outlook

Economic performance during the next decade will be determined substantially by the state's economic structure. Major changes in the structure have left the state with a manufacturing sector composed of more, smaller firms that are producing greater output, but with lower employment. The service and wholesale and retail trade sectors have been responsible for generating most of the new jobs, and each is beginning to rival manufacturing for the leading share of the state's economy. Frequently the new jobs being created require high skills and pay good wages, but many jobs still offer limited remuneration.

Employment growth in the 1990s should be about the same as the 1980s. Demographic changes, such as fewer young people entering the labor force, will result in modest growth in the labor force, and this will preclude more vigorous employment gains. This trend of employment and labor force increases will allow the unemployment rate to be generally lower during this next decade than has been the experience of the 1980s.

The service sector will continue as the major job provider. The finance, insurance, and real estate and wholesale and retail trade sectors will grow well, but both at slower rates than in the 1980s. The manufacturing sector will provide more job growth than in the 1980s, with most of these occur-

ring in the durable goods industries. Nondurable goods industries should be approximately flat in total.

Gross State Product (GSP) grows because of the combination of employment and productivity increases. Productivity should rise about 1.2 percent annually. When combined with the expected 1.9 percent employment growth this means GSP will rise 3.1 percent annually.

Economic forecasts are attempts at forecasting an economic environment for a given set of policies. The economy can be changed with a different set of policies. Employment will be unable to grow much faster than the projections because of the limitations of demographic trends. There will not be enough workers to allow rapid employment growth, though increases can occur through policies designed to attract more senior adults or AFDC recipients into the labor force. The best prospect for stimulating stronger growth in Tennessee's economy than is forecast here lies in achieving better productivity growth. Several options exist for productivity improvements, and it should be noted that some improvements in these areas were anticipated in the forecast. First, a more highly skilled labor force will be more productive. Investments in providing existing workers with enhanced skills through literacy programs and job-specific training programs offer considerable prospects for enhancing worker productivity. An improved education system will be essential to allow entrants in the work force to have better general skills and to become the lifetime learners essential in today's flexible, changing firms. Second, a higher quality infrastructure for Tennesseans to work with is essential. The telecommunications, highway, and water and sewer systems must be able to meet business needs of the 1990s. The emphasis in the future will be on the quality rather than the availability of the infrastructure. Finally, Tennessee businesses must have access to appropriate technology and programs designed to help them implement technology. Production methods are changing too rapidly for many firms to stay abreast of new techniques. The state has a vested interest in ensuring that its firms use the appropriate technology to remain competitive.

CHAPTER 1

THE U.S. ECONOMIC OUTLOOK

Introduction

The 1980s have seen unprecedented swings in inflation, the deepest recession since the Great Depression, budget and trade deficits of historically unprecedented levels, the U.S. shift from the largest creditor nation in the world to the largest debtor nation, a doubling of the national debt, and the longest economic expansion since World War II. Where do all these changes leave the economy as it prepares to head into the 1990s? Can the economic expansion that began in early 1983 continue during the 1990s, or have the seeds been sown for a substantially different economic outlook during the next decade? In this chapter, we set the stage for the Tennessee-specific outlook by examining the national economic developments that have occurred and those that are likely to unfold as we head into the 1990s.

The 1980s began on a dismal economic note and will end on a positive, but not overwhelming note. In between, a variety of economic phenomena have occurred that changed not only the immediate economic situation but also prospects for continued economic growth.

The chapter proceeds as follows. First, the economic highlights of the 1980s are reviewed. Because an exhaustive examination of the developments of the 1980s is beyond the scope of this analysis, we instead opt to identify several key developments that not only have affected economic activity during the past decade but are likely to remain with us for the foreseeable future. These highlights include the impact of the 1982 recession, the growing importance of the international trade sector, developments in the federal budget, and changes in financial and capital markets. Then the chapter turns to a detailed review of 1989 and the prospects for economic activity in the early 1990s. We find that while the economy appears to be rather soft at the present time, there are no imminent signs of recession for 1990. Beyond 1990, however, there is considerable uncertainty about a sustained national economic expansion.

The 1980s--A Decade in Review

The 1980s began on a dismal economic note and will end on a positive, but not overwhelming note. In between, a variety of economic phenomena have occurred that changed not only the immediate economic situation but also prospects for continued economic growth. Here, we highlight four such phenomena, beginning with the 1982 recession.

The 1982 Recession

After almost seven years of sustained economic growth, the 1982 recession may seem like little more than a historical curiosity. Its impact on the economic landscape, however, was significant not only in 1982, but continues today. Specifically, the 1982 recession was by far the deepest economic downturn since the Great Depression of the 1930s. Over the 1982-1983 period, an average of 10.7 million Americans were unemployed, while another 1.6 million discouraged workers had simply given up on the search for employment. In total, over 12 million Americans who either had been, or could be, gainfully employed found themselves out of work. The economic losses associated with such massive unemployment are staggering. Aside from the personal hardship and degradation imposed on the unemployed, the foregone output caused by unemployment is considerable. For instance, Professor Alan Blinder of Princeton University has estimated that if the unemployment rate during 1983 had been 5.8 percent (the level that prevailed in 1979) instead of 9.6 (the 1983 average), over seven million more people would have been employed and gross national product would have been 9 percent higher. The value of the additional output that could have been created by the unemployed amounted to $1,350 for each man, woman, and child in America.[1]

While it has been seven years since the 1982 recession, several by-products of this recession still linger today. For example, in Table 1.1 we see that the inflation-adjusted median family income took a severe hit during the early 1980s. Because of the anemic economy of the early 1980s, it took until 1987 to restore median family income to its 1979 levels for the cross-section of all families. And for black families, the restoration to income levels achieved during the 1970s has yet to occur. Also, the tremendous weakness in the national economy in the early 1980s has led to lingering impacts on poverty levels in the United States. In Table 1.2, we see that both the absolute number and the percentage of people living in poverty increased considerably in the early 1980s. Despite the long economic expansion, neither the absolute number nor the percentage of people living in poverty has yet declined to the lower levels achieved during the 1970s. Moreover, while the severity of the 1982 recession is apparent in aggregate statistics, the scars from this period are most evident when more disaggregated data are examined. For example, the percentage of blacks in poverty grew from just over 31 percent in 1979 to 35.7 percent in 1983. Since 1983, the percentage of blacks living in poverty has fallen, but remains in excess of 31 percent, approximately the same as in 1980.

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1. See Alan S. Blinder, *Hard Heads, Soft Hearts--Tough Minded Economics for a Just Society* (Reading, MA: Addison-Wesley Publishing Company, Inc., 1987.)

TABLE 1.1
Median Family Income, 1979-1987
(In Constant 1987 Dollars)

	All Families	White	Black
1979	30,669	32,003	18,122
1980	28,996	30,211	17,481
1981	27,977	29,388	16,578
1982	27,591	28,969	16,011
1983	28,147	29,474	16,610
1984	28,923	30,294	16,884
1985	29,302	30,799	17,734
1986	30,534	31,935	18,247
1987	30,853	32,274	18,098

Source: *Statistical Abstract of the United States 1989*, 109th Edition, U.S. Department of Commerce, Bureau of the Census.

TABLE 1.2
Persons Below The Poverty Line, 1979-1987
(In Millions)

	All	White	Black	Hispanics	% All
1979	26.1	17.2	8 1	2.9	11.7
1980	29.3	19.7	8.6	3.5	13.0
1981	31.8	21.6	9.2	3.7	14.0
1982	34.4	23.5	9.7	4.3	15.0
1983	35.3	24.0	9.9	4.6	15.2
1984	33.7	23.0	9.5	4.8	14.4
1985	33.1	22.9	8.9	5.2	14.0
1986	32.4	22.2	9.0	5.1	13.6
1987	32.5	21.4	9.7	5.5	13.5

Source: *Statistical Abstract of the United States 1989*, 109th Edition, U.S. Department of Commerce, Bureau of the Census.

Finally, the 1982 recession accentuated and exacerbated a dramatic shift that had begun more than two decades earlier[2] away from manufacturing employment. In Table 1.3, we see that while total nonagricultural job growth has been brisk for the last decade, rising from 87 million to 102 million, the total number of people employed in the manufacturing sector has declined. After hitting a peak employment of 21 million in 1979, the recession of 1982-1983 dropped manufacturing employment to 18.4 million. Despite the subsequent economic expansion, manufacturing employment continues to be less than in the late 1970s.

TABLE 1.3
Employment in Nonagricultural and Agricultural Establishments
1978-1987
(Thousands)

	Nonagricultural				Agricultural
		Selected Sectors			
Employees	Total	Manufacturing	Wholesale & Retail Trade	Services	Total
1978	86,697	20,505	19,542	16,252	10,982
1979	89,823	21,040	20,192	17,112	10,598
1980	90,406	20,285	20,310	17,890	10,501
1981	91,156	20,170	20,547	18,619	10,886
1982	89,596	18,853	20,457	19,064	11,598
1983	90,200	18,434	20,881	19,694	12,310
1984	94,496	19,378	22,100	20,797	12,206
1985	97,519	19,260	23,073	22,000	11,337
1986	99,525	18,965	23,683	23,053	11,778
1987	102,310	19,065	24,381	24,196	11,867

Source: *Statistical Abstract of the United States 1989*, 109th Edition, U.S. Department of Commerce, Bureau of the Census.

2. William F. Fox et al., *An Economic Report to the Governor of the State of Tennessee*, CBER for the Tennessee State Planning Office, November 1986.

In conclusion, the depth of the 1982 recession has left a legacy of reduced family incomes, higher poverty levels, damaged economic status of historically disadvantaged groups, and decreased job opportunities in the traditionally high-paying manufacturing sector. In time, economic growth should overcome these setbacks. Nevertheless, the economic costs imposed by the recession of the early 1980s were considerable and remain noticeable as we head into the 1990s.

Globalization, Competitiveness and the Trade Deficit

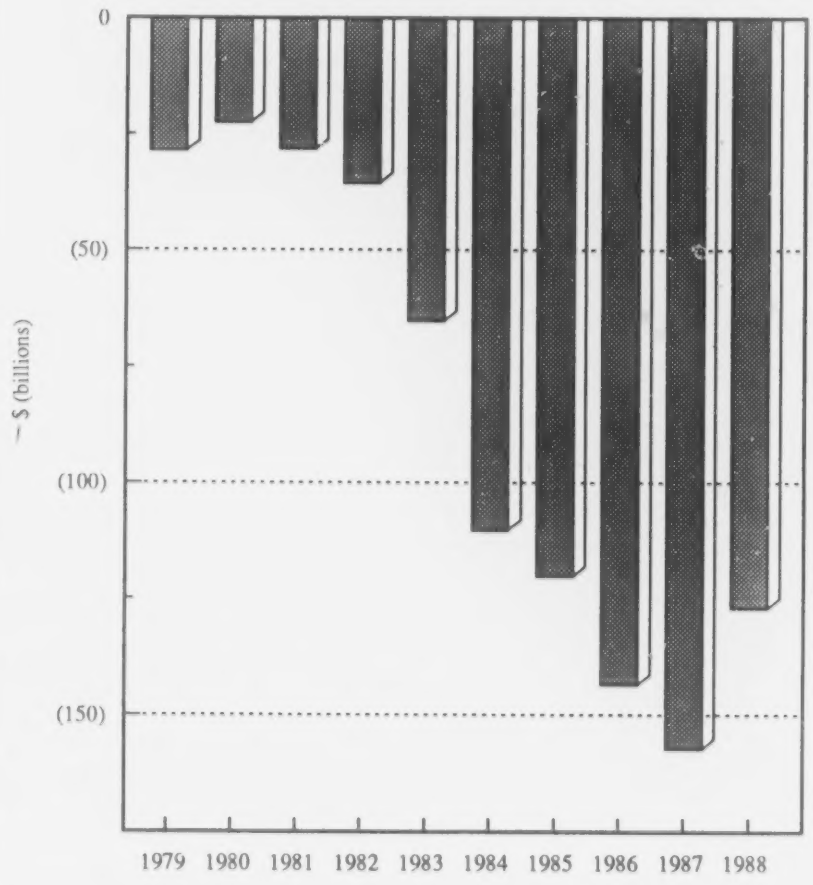
A hallmark of the economic structure of the major world economies during the 1980s has been the increasingly global nature of markets. This globalization is reflected in both economic statistics and casual empiricism. Today it is routinely possible for Americans to purchase automobiles from Japan, Sweden, Germany, Korea, Yugoslavia, and Italy. We purchase shoes from Brazil, Italy, Korea, Singapore, Spain, and so on. Similarly, goods and services from the United States compete for sales in nearly every major foreign country throughout the world.

The economic costs imposed by the recession of the early 1980s were considerable and remain noticeable as we head into the 1990s.

Along with this increasingly global nature of markets has come a deterioration in the United States' balance of trade with foreign countries. In Figure 1.1 we see the level of the trade balance for the United States for the decade of the 1980s. The decade began with a merchandise trade deficit of $22 billion in 1980 and grew to a peak of nearly $160 billion in 1987 before retreating to the current range of $130 billion. When the trade deficit began to swell in the early 1980s, the cause was largely attributed to a rising dollar in international exchange markets. As a result, it was hoped that the trade imbalance would be temporary and self-correcting. When the value of the dollar peaked on international exchange markets in early 1985 and trade balances continued to deteriorate for the subsequent three years, a widespread concern began to surface that America had lost its "competitiveness" in world markets. A flurry of academic and policy studies and hearings were conducted, and very few definitive conclusions emerged. Trade bills were passed, however, that have given greater latitude for the United States trade authorities to bring pressure on foreign powers to open their markets to U.S. goods and services.

The trade deficit of the 1980s has caused a number of economic dislocations and opportunities that are likely to persist into the 1990s. However, these dislocations and opportunities are not uniform across industries and have the potential to generate considerable economic disruptions. For instance, a recent study of trade flows during the 1980s identified the various manufacturing sectors that are most vulnerable to imports (i.e., are least protected by economic, governmental, or technological trade bar-

FIGURE 1.1
Merchandise Trade Deficit



Source: The WEFA Group, *U.S. Long-Term Economic Outlook*, Third Quarter, 1989, Vol. I.

riers).[3] In Table 1.4 the list of the 30 most vulnerable domestic manufacturing industries is shown. Notice that the list is dominated by various footwear, apparel, and leather industries. Thus, to the extent that a regional economy (e.g., Tennessee) is dependent on such industries for employment opportunities, the risk of job loss to imports is likely to remain quite high during the 1990s.

3. See Don P. Clark, David L. Kaserman, and John W. Mayo, "Barriers to Trade and the Import Vulnerability of U.S. Manufacturing Industries," *Journal of Industrial Economics*, forthcoming.

TABLE 1.4
U.S. Manufacturing Industries
Most Vulnerable To Imports

Rank	SIC*	Industry Description
1	3636	Sewing Machines
2	3263	Fine Earthenware Table and Kitchen Articles
3	3151	Leather Gloves and Mittens
4	2121	Cigars
5	3149	Footwear, except Rubber, n.e.c.
6	3144	Women's Footwear, except Athletic
7	3142	House Slippers
8	3021	Rubber and Plastics Footwear
9	3143	Men's Footwear, except Athletic
10	3581	Automatic Merchandising Machines
11	2369	Girls', Children's and Infants Outerwear, n.e.c.
12	3911	Jewelry, Precious Metal
13	3961	Costume Jewelry and Costume Novelties, except Precious Metal
14	2331	Women's, Misses' and Junior's Blouses, Waists and Shirts
15	2252	Hosiery
16	2391	Curtains and Draperies
17	2321	Men's, Youths', and Boy's Shirts and Nightwear
18	2381	Dresses and Work Gloves, except Knit and All-Leather
19	2341	Womens', Misses', Children's and Infants Underwear and Nightwear
20	2386	Leather and Sheep Lined Clothing
21	3269	Pottery Products
22	3732	Boat Building and Repair
23	3199	Leather Goods, n.e.c.
24	3172	Personal Leather Goods, except Women's Handbags and Purses
25	2389	Apparel and Accessories, n.e.c.
26	3915	Jewelers' Findings, Materials, and Lapidary Work
27	3931	Musical Instruments
28	2352	Hats and Caps, except Military
29	2337	Women's, Misses', and Junior's Suits, Skirts, and Coats
30	2771	Greeting Card Publishing

Note: n.e.c. = not elsewhere classified.
* Standard Industrial Code.
Source: Clark, Kaserman, and Mayo (forthcoming), supra.

Federal Fiscal Policy

During the 1980s significant changes occurred in federal fiscal policy that not only affected the economic climate during the past decade, but will also be felt during the 1990s. Specifically, beginning with the 1981 federal tax cuts, the federal budget deficit began to skyrocket. The large tax cuts were predicated upon the notion that income tax revenues would rise with reduced rates. While this idea was widely discredited by economists, it proved to be a politically popular vehicle for tax reductions. In the years immediately following the tax cut, it was argued that the large budget deficits were the result of the weak economy of the early 1980s. Accordingly, once the economy began to grow, it was argued the deficit would be eliminated. Now, after economic growth for seven years and a sustained budget deficit still well over $100 billion, it has become clear to even the most casual observer that the federal budget deficit is *structural* rather than *cyclical*. Economic growth simply will not, in the foreseeable future, eliminate the federal budget deficit. Moreover, despite the hoopla that surrounded the passage of the Gramm-Rudman-Hollings Balanced Budget Act, the baseline policies necessary to achieve a balanced budget have not been put in place. Indeed, in its most recent analysis and projection of the budget outlook, the Congressional Budget Office (CBO) stated:

*After economic growth for seven years and a sustained budget deficit still well over $100 billion, it has become clear to even the most casual observer that the federal budget deficit is **structural** rather than cyclical.*

> The projected deficits far exceed the targets of the Balanced Budget Act, commonly known as Gramm-Rudman-Hollings . . . . In 1990, the current focus of policymakers' attention, the baseline deficit exceeds the $100 million target by more than $41 billion. In 1993, according to the act's requirements, the budget is to be balanced; instead, the projected deficit under current policies is $143 billion.

The CBO projections of federal revenues, outlays, the deficit and the national debt are given in Table 1.5.

The baseline budget deficit projections, together with the mandatory budget deficit reduction targets imposed by Gramm-Rudman-Hollings (GRH), are certain to create friction in the federal budgeting process in the years to come. The policy options available to address the structural budget deficit are, by this time, almost as well-known as they are unpalatable: (1) raise taxes; (2) abandon the goal of a full-employment balanced budget (by repealing GRH); (3) sharply curtail the growth in defense expenditures; (4) continue to move various expenditures (such as the savings and loan bailout) off budget; (5) continue to sell government-held assets; and/or (6) continue to make deep cuts in discretionary non-defense programs. While some combination of these federal policy options seems most likely, virtually all the options will take time to unfold, and as a result federal fiscal policy will remain "exposed" as we head into the 1990s. The clear consequences of this exposure will be a reduced ability to

TABLE 1.5
CBO Baseline Projections Of Revenues, Outlays, Deficit, And Debt
(By Fiscal Year, 1990-1994)

	Actual 1988	Base 1989	Projections 1990	1991	1992	1993	1994
	In Billions of Dollars						
Revenues	909	991	1,071	1,138	1,207	1,287	1,372
Outlays	1,064	1,152	1,212	1,282	1,348	1,430	1,500
Deficit	155	161	141	144	141	143	128
Deficit Targets	144	136	100	64	28	0	(a)
Debt Held by the Public	2,050	2,196	2,338	2,481	2,621	2,762	2,890
	As a Percentage of Gross National Product						
Revenues	19.0	19.3	19.6	19.5	19.4	19.3	19.3
Outlays	22.3	22.4	22.2	22.0	21.7	21.5	21.1
Deficit	3.2	3.1	2.6	2.5	2.3	2.1	1.8
Debt Held by the Public	42.9	42.7	42.8	42.6	42.1	41.5	40.7
Reference: GNP (In billions of dollars)	$4,780	$5,138	$5,463	$5,826	$6,225	$6,652	$7,108

a. The Balanced Budget Act set deficit targets only through fiscal year 1993.

Source: Congressional Budget Office.

Over the past decade, U.S. financial markets have been characterized by periods of volatile growth which have been at least partially the result of increased foreign participation in these markets.

respond at the federal level to national economic downturns and continued reductions in federal aid to state and regional economies.

Capital and Financial Markets

Over the past decade, U.S. financial markets have been characterized by periods of volatile growth which have been at least partially the result of increased foreign participation in these markets. At the same time, America's banking industry and other financial institutions have been largely restructured, resulting in new opportunities for some institutions and the demise of others. As might be guessed, this volatility has greatly affected the stability, organization, and earnings of those domestic firms which continually look to these markets and institutions as a source of capital.

U.S. stock markets have repeatedly established new records for the value of traded stocks, the volume of transactions, and the relative variability of stock prices. To a large degree, bond markets have mirrored the movement in stock prices. Further, this decade has witnessed the evolution of a new debt instrument, the "junk" bond, which has been successfully employed as a means of raising quick capital for uninvited (hostile) acquisitions. Commercial banks, freed of many regulations, now offer a wider array of products and services. The subsequent flood of unwar-

ranted risk-taking, coupled with the effects of the 1982 recession, have crippled, if not destroyed, the savings and loan industry, necessitating a multi-billion dollar federal bailout.

The relation between these changes and the various spheres of commerce have been substantial and quite disparate. The tumultuous growth in some financial markets has often increased firms' propensities toward consolidations, producing a record level of merger activity. Equally evident, however, has been the perceived need by firms targeted for acquisition to streamline operations and thereby reduce debt. Thus, while some firms have been engaged in consolidation, others have divested themselves of peripheral concerns which had often been acquired in earlier conglomerate mergers.

Stocks and bonds. If any single event embodies the volatility alluded to above, it is the almost instantaneous global deflation of stock prices which occurred on October 20, 1987. "Black Tuesday," as it has come to be called, capped a two-month-long period of extremely heavy trading and oscillating stock prices. At the lowest point on that date, the Dow Jones Industrial Average (DJIA) was 1708.70, down 1000 points from its August 25th high. This represents a 37 percent decline in stock values. As extreme as this event was, it typifies a decade of activity in which the DJIA moved from a value of below 900 in 1981 to its present level of over 2600 and in which the average volume of traded shares has moved from approximately 50 million to nearly 200 million shares per day. The events of late 1987 have been partially attributed to both necessary market corrections and to "program" trading. Still, many analysts believe that the economic factors which rendered traders so anxious and precipitated a panic of such magnitude are still in evidence today.

As expected, a significant portion of the volatility in stock prices was reflected in the bond market. Still, the swings in this market were far less pronounced. Also, for the second decade in a row (1978-1988), bond yields outpaced equity earnings, bringing into question the long-held notion that stocks will always outperform bonds in the long run.[4] Perhaps the most notable event in the arena of debt securities was the rise to prominence of the "junk" bond, a high-risk, high-yield instrument which proved quite effective as a means of financing hostile takeovers. According to some analysts, "High-yield bonds proved especially valuable in takeovers because they allowed the raider to assure investors that the target

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4. For a discussion of this matter see R. S. Salomon, Jr., E. H. Sorensen, C. H. Davenport, and M. A. Fiore, "Returns on Various Types of Investments," *Business and Investment Almanac* (Dow Jones-Irwin: Homewood, Illinois 1989).

company's cash flow would largely be paid out rather than reinvested at below-market rates."[5] While the pioneer of the junk bond, Michael Milken, and his employer Drexel Burnham Lambert face both civil and criminal charges for securities fraud, most believe that the market trading of junk bonds will continue to grow.[6]

Banking and thrifts. Perhaps in the long run, the most significant financial event of the 1980s was the apparent self-destruction of the nation's savings and loan industry. Late in 1988, nearly 3000 thrifts were in operation. Of these, over one-third were reporting losses, and 500 of the S&L's were said to be completely insolvent. The estimated cost to the federal government of paying guaranteed deposits and thus resolving the crisis is estimated to be in excess of $100 billion.[7] Certainly, even at the beginning of the decade, S&L's were suffering from low profits.[8] Still, the magnitude of this disaster is likely the responsibility of thrift managers who exhibited an almost unbelievable (if not entirely fraudulent) ability to invest newly acquired deposits in highly speculative and often unsecured ventures. This almost perversely amorous attitude toward risk, combined with the 1982 recession, led many savings and loans into sudden and irreversible difficulties.[9]

Happily, the commercial banking industry offered a more stable performance. Freed of regulations which prohibit the paying of interest on patron deposits, banks aggressively pursued new customers. Figure 1.2 shows the growth in bank deposits over this period and the corresponding asset growth. Still, the 1980s presented numerous challenges to the industry. Declining oil prices harmed numerous southwestern and western banks just as sagging agricultural prices threatened banks in the midwestern and plains states. Between 1980 and 1987, the F.D.I.C. reported 621 bank failures. The six largest of these are reported in Table 1.6.

Mergers and acquisitions. As noted above, the growth in the market for junk bonds greatly enhanced the ability of firms to aggressively seek control of other interests. Further, the junk bond market was by no means the only means of financing such ventures. The "corporate raiders" appeared in a wide array of industries, applying a diverse set of techniques

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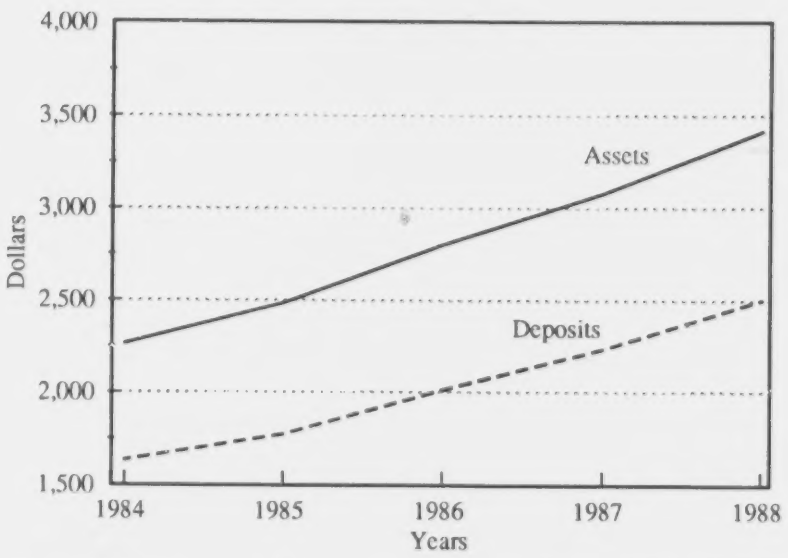
5. See Henry G. Manne and Larry E. Ribstein, "The SEC v. The American Shareholder," *National Review*, November 25, 1988, pp. 26-29.
6. See "Junk Bonds After the Milken Mess," *Fortune*, October 10, 1988, pp. 60-63.
7. The publication from which these figures were drawn makes the interesting point that this cost is more than double the amount (in real terms) that was spent on the Marshall Plan. See "The S&L Mess and How to Fix It," *Business Week*, October 31, 1988, pp. 130-140.
8. The chronic inflation of the 1970s had trapped many S&L's with assets that yielded returns far below market levels.
9. The sometimes-heard claim that the fare of the S&L's resulted from the deregulation of the banking industry seems without substance for the most part. While banking did provide new competition for the thrifts, deregulation in the savings industry enabled it to attract millions in new deposits during the early 1980s. It was with these new deposits that the savings and loans most often acquired their riskiest assets.

FIGURE 1.2
Growth In Bank Deposits
1984-1988
(In Billions of $)



Source: *The 1989 Dow Jones-Irwin Business and Investment Almanac* Homewood, Ill: Dow-Jones Irwin Summer N. Levine, editor.

toward the hostile acquisition of target firms. These targets responded with an equally inventive number of defensive measures, which include the sale of subsidiary firms, the institution of "shareholders' rights plans ("poison pills") and stock buy-back programs. For example, in its attempt to fend off corporate raiders, Phillips Petroleum borrowed millions to purchase its own stock. Its debt as a percentage of total capitalization increased from 39 percent to 84 percent as a result of the takeover attempt.

Hostile takeovers resulted in a significant number of consolidations. However, there were an equally impressive number of mergers that were undertaken willingly. The massive increase in the number and size of firm mergers can be at least partially attributed to the shift in antitrust policy associated with the Reagan Administration. In 1982, the Reagan Justice Department replaced long-standing, concentration-based guidelines with a new set of directives which were much more attentive to market definition and the conditions of entry. These guidelines were further modified in 1984. The result was the largest wave of corporate mergers in this half of the twentieth century.

TABLE 1.6
Six Largest Bank Failures, 1980-1987
(By Asset Size)

	Assets	Deposits	Date
First National Bank and Trust Company, Oklahoma City, Oklahoma	1,419,445,375	1,006,657,507	July 14, 1986
The First National Bank of Midland, Midland, Texas	1,404,092,000	1,076,217,000	October 14, 1983
United American Bank Knoxville, Tennessee	778,434,000	584,619,000	February 14, 1983
Park Bank of Florida St. Petersburg, Florida	592,900,000	543,900,000	February 14, 1986
Yankee Bank for Finance and Savings, FSB, Boston, Massachusetts	521,700,000	474,800,000	October 16, 1987
Penn Square Bank, N.A. Oklahoma City, Oklahoma	516,799,000	470,445,000	July 6, 1982

Source: Federal Deposit Insurance Corporation, *1987 Annual Report*.

1989 and Beyond

When evaluated at the most aggregate level, 1989 was a year of modestly reassuring economic performance. For the year, real GNP growth should be just under 3.0 percent. While down from the 4.4 percent growth of 1988, this growth rate has certainly been sufficient to extend the current economic expansion through 1989. Other aggregate indicators of the economic health of the U.S. economy in 1989 are also likely to be modestly encouraging. National employment growth will be roughly 2.8 percent for 1989, down from 3.3 in 1988, but still respectable. Capacity utilization in the manufacturing sector will on an annual basis, creep up to 84 percent, following its upward trend during the economic expansion. The annual inflation rate for 1989 will in all likelihood be up from 1988, though not by much. The 1989 inflation rate, as measured by the Consumer Price Index, should be just under 5.0 percent, up from 4.1 percent in 1988. While reductions in the prime interest rate toward the end of 1989 held interest rates down a bit, they were, overall, higher in 1989 than in recent years. The annual average interest rate for three-month Treasury bills will be in excess of 8 percent in 1989.

While there is nothing ominous in these aggregate economic statistics, a more detailed examination of the components of economic activity provide very mixed signals for the period beyond 1989. For instance, the economic expansion that, since 1983, has been fueled by robust growth of consumer expenditures, has recently experienced some softness in this sector. After

growing at an inflation-adjusted annual average of 2.8 percent in the last half of 1988, consumer spending growth fell to only 0.6 percent in the first quarter of 1989 and 0.1 percent in the second. While a more rapid growth rate of consumer spending occurred in the third quarter of 1989 (5.8 percent), most indications are that this surge is the result of rebate-led purchases of automobiles. If, as is widely anticipated, the third quarter surge in automobile purchases is followed by a commensurate drop in fourth quarter auto sales, consumer spending is likely to *fall* as we head into 1990. Because consumer spending constitutes roughly two-thirds of all economic activity, the continuation of the current economic expansion will depend vitally on the performance of consumer spending during 1990 and beyond. While it would be premature at this point to claim that a downturn of consumer spending is imminent, the teeter-totter performance during 1989 raises questions about the robustness of consumer spending as we head into the 1990s.

The slowdown in consumer spending during the first half of 1989 led to repercussions in the investment sector during the last half of 1989.

Similar "vulnerabilities" of other major components of GNP also surfaced during 1989. Specifically, the slowdown in consumer spending during the first half of 1989 led to repercussions in the investment sector during the last half of 1989. The latest survey of capital spending plans by businesses reveals that, after growing real expenditures on plant and equipment spending in early 1989, the clear expectation is that capital spending will decline in late 1989. Moreover, despite an apparent rebound of consumer spending during the third quarter of 1989, this weakness in capital is expected to dominate the investment picture during 1990.

Federal fiscal policy has been, and is likely to continue to be, more of the same for the near term. Despite the budget deficit reduction targets established by GRH, the expectation is that the federal deficit will remain over $100 billion for the foreseeable future (see Table 1.5). Government purchases (net of inflation) are expected to grow in the 1.5 percent range between 1990 and 1992.

Finally, the strong dollar of late 1989 has slowed export growth in the most recent data available. During the third quarter of 1989 exports were flat, while imports increased at a .5 percent seasonally-adjusted annual rate. The expectation is that after two years of considerable improvement, the international trade deficit will improve only modestly, if at all, during 1989-1990. Expectations of increases in the real price of imported oil in the 1991-1992 period suggest a modest deterioration in the trade deficit during this time frame.

In summary, the recent aggregate economic picture has been one of mild expansion and modest inflation. No known major economic events loom on the horizon to definitely alter the outlook for more of the same. At the same time, no individual sector of the economy has shown the sort of contagious energy that was observed in the mid-1980s. Indeed, as the WEFA Group recently stated:

> In some respects, the current expansion can be likened to a relay race, where each sprinter passes the baton on to the next. As one sector of the economy began to tire, another sector took the baton and kept running. We now find ourselves in the predicament where all of our runners have tired, and the best that we can hope for in the quarters ahead is a brisk walk.[10]

In light of these considerations the expectation is that real economic growth, as reflected by changes in the inflation-adjusted GNP, will be a very modest 2.0 percent in 1990. While our expectation is for this modest growth, the possibility of continued weakness in consumer spending, investment and international trade cannot be ruled out. Under such a scenario, 1990 would experience a mild recession. For the subsequent years of 1991 and 1992, we expect a modest increase from 1990 levels, with GNP growth rates of 2.5 to 3.0 percent. Employment growth will also be quite modest during the early 1990s, ranging from 1.6 to 2.0 percent. The overall softness of the economy during the early 1990s, combined with an accommodating Federal Reserve Board, should lead to small declines in interest rates for the near to mid-term. ■

10. "U.S. Economic Outlook: 1989-92," November 1989.

CHAPTER 2

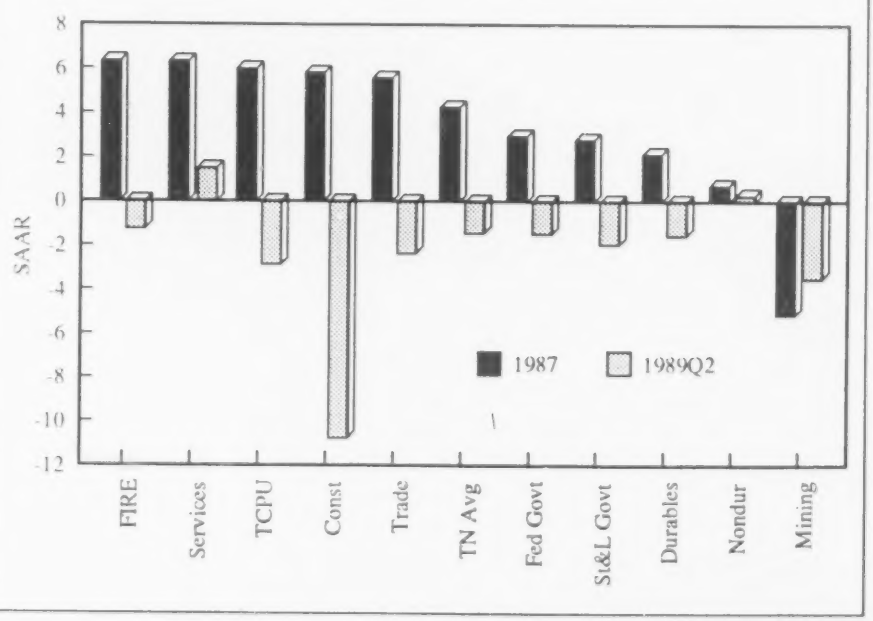
THE SHORT-TERM OUTLOOK FOR TENNESSEE

While Tennessee's economy normally follows national trends, several factors have combined recently to make the economic outlook for Tennessee significantly different from the national outlook. For example, economic indicators for Tennessee show that the state is experiencing slower growth than the U.S. average. There are several reasons for this relatively sluggish performance. First, a more valuable dollar has made it difficult for Tennessee manufacturers to export their products and has made foreign products relatively less expensive. Second, federal government employment has been scaled back in Tennessee. Third, higher interest rates and tax reform have resulted in less construction activity. Finally, less dynamic growth in Tennessee metropolitan areas has reduced statewide growth.

Slow employment growth in manufacturing (especially nondurables), federal government, and construction, as well as slower metropolitan area growth, have led to a broadly-based slowdown in all sectors of Tennessee's economy.

Slow employment growth in manufacturing (especially nondurables), federal government, and construction, as well as slower metropolitan area growth, have led to a broadly-based slowdown in all sectors of Tennessee's economy. The slowdown is illustrated in Figure 2.1, which compares sectoral employment growth in 1987 to annual growth rates for

FIGURE 2.1
Tennessee Nonagricultural Employment Growth by Industry
1987 and 1989/Q2



the second quarter of 1989. Slower growth in manufacturing, federal government, and construction are readily apparent. However, this lethargy has spilled over into the large services and trade sectors, as well as the finance, insurance, and real estate (FIRE) and transportation, communications, and public utilities (TCPU) sectors. All of these sectors are experiencing significantly slower employment growth than in 1987.

Current Developments

Tennessee Economic Indicators

Tennessee's leading index of economic indicators increased from 114.1 to 114.2 in September, a slight 1 percent at a seasonally adjusted annual rate (SAAR). (See Table 2.1.) September's increase follows a large 12.8 percent increase in August. While the September increase was meager, its significance is that it combines with August to initiate an upward trend, whereas the index had established a downward trend prior to August. Thus far, the cumulative effect of these offsetting trends is a weak 0.2 percent increase in the leading index from September 1988 to September 1989. Hence, stronger growth is needed before the effects of losses earlier in the year will be erased. Both the August and September increases were bolstered by low inflation at the national level, which makes nominal and real growth rates of dollar-valued variables closer together. Hence, a nominal growth rate that superficially appears low can represent healthy real growth. From June through September, inflation as measured by the U.S. consumer price index for all urban consumers averaged only 1.7 percent at a SAAR.

Three seasonally adjusted components of the index contributed to the September increase. Real taxable sales increased 2.4 percent, but were below the level of September 1988 by 0.2 percent. Initial claims for regular Tennessee unemployment insurance decreased by 5,400 claims, suggesting some renewed strength in Tennessee's labor markets, but still leaving initial claims 14 percent above September 1988. Finally, the U.S. leading index increased 2.5 percent at a SAAR. Overall, the U.S. leading index has had a slow year, increasing only 0.9 percent since September 1988.

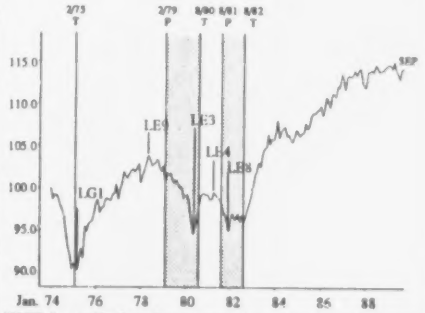
Two seasonally adjusted components of the index offset these hopeful indicators. Real Tennessee taxable mortgages decreased in September, and were 1.9 percent below September 1988. Also, total Tennessee construction starts fell slightly, from 470.7 units to 467.2 units. However, construction starts remained 5 percent above September 1988.

The Tennessee composite index of coincident indicators increased as well in September, from 126.4 in August to 127.2. This represents a robust 7.4 percent SAAR increase, and places the coincident index a moderate 2.8 percent above September 1988. In July and August the coincident index was less than 2 percent above its year-ago levels, so the return to annual growth rates above 2.5 percent is encouraging.

None of the seasonally adjusted components of Tennessee's coincident index decreased in September, although the U.S. coincident index was unchanged from August. Commercial and industrial electricity consumption increased 28 million kwh, which contributed to a 3.9 percent increase since September 1988. The Memphis help wanted index increased from 140 to 143, placing it 2.1 percent above September 1988.

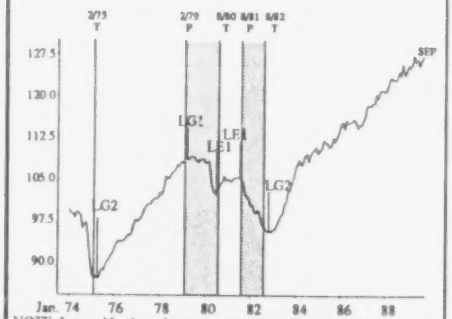
Whether Tennessee's labor markets are healthy remains an unanswered question, as conflicting signals occurred again in September. As mentioned above, seasonally adjusted initial claims for regular unemployment insurance decreased in September. Moreover, the seasonally adjusted civilian unemployment rate was an extremely low 3.9 percent. However, as has occurred several times in recent months, the low Tennessee unemployment rate was associated with a decrease in the size of the labor force. Seasonally adjusted nonagricultural employment fell again in September, making January and August the only months in 1989 during which nonagricultural employment increased. The cumulative effect of these decreases is lethargic 1 percent growth in nonagricultural employment since September 1988.

FIGURE 2.2
Leading Index



NOTE: Lag and lead numbers represent the number of months between the peak or trough of the leading index and the middle of the peak or trough quarter of the reference series index.
LG = lag; LE = lead
P = peak; T = trough

FIGURE 2.3
Coincident Index



NOTE: Lag and lead numbers represent the number of months between the peak or trough of the coincident index and the middle of the peak or trough quarter of the reference series index.
LG = lag; LE = lead
P = peak; T = trough

TABLE 2.1
Tennessee Economic Indicators
(Seasonally Adjusted)

	9/88	10/88	11/88	12/88	1/89	2/89	3/89	4/89	5/89	6/89	7/89	8/89	9/89	1988	1987	1986
US Personal Income (BIL $2 $) (1)	3446.5	3453.7	3465.4	3484.9	3519.9	3543.5	3559.8	3558.1	3565.4	3556.8	3569.3	3579.4	3594.0	3214.6	3321.8	3423.9
% Chg Prev Month SAAR	2.12	13.73	-8.11	6.97	12.71	8.36	5.65	-0.57	-4.19	3.91	4.32	3.46	1.53	4.05	3.33	3.38
% Chg Same Month Last Yr	3.47	2.87	2.88	3.12	4.20	4.48	4.39	4.07	3.72	3.73	3.76	4.04	3.99	4.05	3.33	3.38
US CPI,All Urban Consumers (1982-84=100)	119.5	120.0	120.3	120.7	121.4	121.9	122.6	123.3	124.0	124.2	124.5	124.5	124.7	109.7	113.7	118.3
% Chg Prev Month SAAR	5.16	5.14	3.04	4.06	7.19	5.08	8.07	8.12	7.03	1.95	2.94	0.00	1.94	1.92	3.68	4.00
% Chg Same Month Last Yr	4.28	4.35	4.25	4.41	4.57	4.82	4.97	5.20	5.35	5.17	4.97	4.82	4.35	1.92	3.68	4.08
TN Nonag Employment (THOU) (2)	2060.8	2070.1	2084.3	2070.9	2086.9	2086.6	2080.4	2079.4	2077.2	2074.4	2074.4	2081.4	2080.9	1929.8	2011.4	2085.9
% Chg Prv Month SAAR	-0.94	5.51	8.59	-7.45	9.64	-0.14	-3.50	-0.63	-1.22	-1.62	0.00	4.11	-0.29	3.33	4.23	3.71
% Chg Same Month Last Yr	1.55	1.44	1.86	0.77	1.84	1.23	0.52	0.58	0.66	0.36	0.37	0.92	0.87	3.33	4.23	3.71
US Nonag Employment (MIL)	108.2	108.5	108.8	107.1	107.4	107.7	107.9	108.1	108.3	108.6	108.8	108.9	109.1	99.5	102.2	105.6
% Chg Prev Month SAAR	2.90	3.07	4.00	3.11	3.03	3.05	1.99	2.39	2.34	3.34	1.78	1.33	2.24	2.06	2.69	3.31
% Chg Same Month Last Yr	3.43	3.16	3.24	3.19	3.34	3.16	3.06	3.05	3.06	2.89	2.84	3.77	2.71	2.06	2.69	3.31
TN Unemployment Rate (%) (2)	5.9	5.8	5.8	5.8	5.3	5.5	5.6	5.3	5.6	5.0	4.8	4.8	3.9	5.0	5.6	5.8
US Unemployment Rate (%)	5.4	5.3	5.4	5.3	5.4	5.1	5.0	5.3	5.2	5.3	5.2	5.2	5.3	7.0	6.2	6.9
Bank Prime Interest Rate (%)	10.0	10.0	10.1	10.5	10.5	10.9	11.5	11.5	11.5	11.1	11.0	10.5	10.5	8.3	8.2	9.3
US Coincident Composite Index (1967=100)	129.0	130.4	130.3	131.1	131.8	132.0	132.0	132.8	132.5	132.8	132.8	133.9	133.9	118.7	122.4	128.2
% Chg Prv Month SAAR	0.00	13.83	-0.92	7.62	6.80	1.84	0.00	7.52	-2.68	2.75	-1.79	12.42	0.00	2.32	3.15	4.72
% Chg Same Month Last Yr	4.79	4.40	4.57	3.97	5.27	4.76	4.18	4.65	4.17	3.99	3.11	3.80	3.80	2.32	3.15	4.72
US Leading Composite Index (1967=100)	143.7	144.0	144.1	145.1	146.0	145.8	144.7	145.8	144.2	144.0	144.0	144.7	145.0	132.3	140.1	142.8
% Chg Prv Month SAAR	-3.28	2.53	0.84	8.85	7.70	-3.24	-7.17	9.51	-12.40	-1.65	0.00	5.99	2.52	6.55	5.90	1.93
% Chg Same Month Last Yr	0.56	1.19	2.71	3.87	4.81	3.26	2.32	2.68	1.69	0.00	0.70	0.42	0.90	6.55	5.90	1.93
TN Coincident Composite Index (1/74=100)	123.7	125.7	123.8	124.5	125.5	125.2	125.7	127.3	126.2	126.7	125.5	126.4	127.2	115.2	118.0	123.4
% Chg Prv Month SAAR	-7.18	21.18	-16.99	6.81	10.61	-3.20	6.56	16.53	-9.18	4.03	-10.70	9.77	7.36	3.11	3.31	3.64
% Chg Same Month Last Yr	3.32	3.79	2.22	2.82	3.79	3.02	2.20	3.10	2.75	3.09	1.79	1.57	2.81	3.11	3.31	3.64
TN Leading Composite Index (1/74=100)	114.0	113.9	114.3	114.5	114.7	114.7	114.2	115.0	114.0	113.6	113.0	114.1	114.3	110.8	113.2	113.9
% Chg Prv Month SAAR	1.80	-0.33	4.26	1.44	2.20	-0.23	-4.93	9.50	-10.72	-4.10	-6.98	12.82	2.04	2.90	2.17	0.64
% Chg Same Month Last Yr	-0.07	-0.31	1.49	2.15	3.42	0.68	0.32	0.88	0.18	-0.93	-1.22	0.36	0.22	2.90	2.17	0.64
TN Comm & Ind Elect Consumption (MIL KWH) (3)	2259	2285	2244	2268	2255	2270	2299	2321	2288	2356	2262	2290	2347	24323	25131	26792
% Chg Prv Month SAAR	-3.45	14.75	-19.67	12.63	-5.92	8.58	16.42	12.25	-15.98	42.36	-38.61	15.92	94.35	3.68	3.28	6.85
% Chg Same Month Last Yr	6.07	7.37	2.36	4.92	3.82	2.79	2.61	4.45	4.18	7.01	1.40	1.08	3.91	3.68	3.28	6.85
Help Wanted Index,Memphis (1967=100) (4)	140	155	134	135	146	138	142	155	147	142	139	140	143	125	143	144
% Chg Prv Month SAAR	-56.30	239.18	-82.57	9.33	155.99	-49.15	40.90	186.10	-47.05	-33.98	-22.60	8.98	28.97	(6.60	13.91	0.93
% Chg Same Month Last Yr	-2.10	3.33	-6.29	-0.74	5.04	-1.43	-4.70	-0.64	-1.34	0.71	-0.71	-6.67	2.14	16.60	13.91	0.93
TN Mfg Employment (THOU) (2)	506.8	508.6	508.9	510.7	512.4	511.5	511.0	510.8	510.0	510.7	510.5	511.5	510.2	490.6	497.4	508.2
% Chg Prv Month SAAR	-2.64	4.33	0.57	4.32	4.23	-2.26	-1.01	-0.57	-1.90	1.65	-0.45	2.48	-3.02	-0.38	1.40	2.17
% Chg Same Month Last Yr	1.26	0.68	0.51	0.57	0.94	0.44	0.52	0.58	0.55	0.66	0.46	0.70	0.67	-0.38	1.40	2.17
US Mfg Employment (MIL)	19.4	19.5	19.6	19.6	19.6	19.6	19.7	19.7	19.7	19.6	19.6	19.6	19.6	19.0	19.0	19.4
% Chg Prv Month SAAR	0.37	4.67	3.25	1.98	3.67	0.00	1.97	-0.49	-0.31	-1.03	-0.06	-0.30	-5.25	-1.53	0.31	1.99
% Chg Same Month Last Yr	1.73	1.86	1.82	1.80	2.04	1.95	2.04	1.79	1.92	1.28	1.03	1.13	0.64	-1.53	0.31	1.99
TN Mfg Avg Weekly Hours (2)	41.3	41.2	41.4	41.4	41.1	41.4	41.1	41.0	41.0	41.2	41.2	41.2	41.5	41.3	41.6	41.6
% Chg Prv Month SAAR	-0.81	-1.81	3.79	-0.30	-7.90	10.50	-9.94	-1.39	-0.95	6.56	-0.92	-0.03	10.89	0.67	0.78	0.07
% Chg Same Month Last Yr	1.21	-1.47	-1.74	-1.41	-3.32	-0.75	-2.17	-1.80	-1.37	-1.15	-0.68	-0.42	0.52	0.67	0.78	0.07
TN Taxable Sales (MIL $) (5)	3343	3274	3381	3451	3442	3367	3514	3408	3451	3406	3454	3470	3482	35377	27594	39843
% Chg Prv Month SAAR	49.22	-21.95	46.69	27.84	-2.83	-23.32	67.12	-30.86	16.39	-14.70	18.35	5.56	4.40	7.87	6.27	9.88
% Chg Same Month Last Yr	5.25	-1.72	8.45	5.97	7.27	0.34	5.57	2.89	5.31	0.69	4.78	7.31	4.16	7.87	6.27	9.88
TN Taxable Sales (MIL 82 $) (5)	2797	2729	2810	2859	2836	2762	2869	2764	2783	2742	2774	2787	2792	32249	33057	33668
% Chg Prv Month SAAR	41.80	-25.77	42.36	22.85	-9.35	-27.01	57.55	-36.06	8.74	-16.33	14.97	5.56	2.41	5.84	2.51	1.85
% Chg Same Month Last Yr	0.93	-5.81	4.03	1.50	2.59	-4.27	0.57	-2.20	-0.04	-4.25	-0.18	2.67	-0.18	5.84	2.51	1.85
Initial Claims For TN UI (THOU) (2)	36.7	35.6	38.0	32.0	36.0	34.4	34.7	30.8	39.0	39.9	43.3	40.3	37.9	510.8	430.1	415.4
% Chg Prv Month SAAR	-35.4	-29.0	115.8	-87.3	308.4	-41.7	13.3	-76.5	1614.4	32.4	165.1	0.3	-80.1	-5.1	-14.2	-5.2
% Chg Same Month Last Yr	11.86	16.55	16.18	-20.84	-3.93	3.12	-3.85	-2.54	15.87	19.22	47.38	13.96	3.33	-5.13	-14.24	-5.18
Continued Weeks Claimed For TN UI (THOU) (2)	187.1	170.8	202.1	147.9	180.1	169.0	173.1	163.6	181.3	174.6	178.2	188.5	173.4	2300.5	2058.8	2061.6
% Chg Prv Month SAAR	-81.8	29.9	655.3	-97.7	997.7	-53.4	33.7	-49.4	242.5	-36.0	27.5	95.8	-63.2	-3.7	-10.5	0.1
% Chg Same Month Last Yr	-9.49	11.06	22.49	-11.45	6.43	-5.37	-6.05	0.74	7.36	2.91	18.31	-2.05	3.78	-9.78	-10.61	0.14
Total TN Construction Starts ($)	445.0	425.9	466.3	438.5	454.2	471.8	386.8	529.8	439.1	448.0	415.7	470.7	467.2	5264.1	5329.1	5274.5
% Chg Prv Month SAAR	-19.8	-40.8	416.0	-72.5	52.3	50.5	-90.8	4260.1	-89.5	27.2	-59.3	345.3	-6.7	-12.3	1.2	-1.0
% Chg Same Month Last Yr	3.20	-4.87	18.19	2.43	33.82	9.30	-12.89	23.76	-5.65	-6.56	-3.36	3.86	5.00	-12.34	1.23	-1.02
Value Of TN Constrc Starts (MIL 82 $,NSA) (6)	325	394	294	337	278	220	279	380	295	406	296	419	124	4168	4496	4266
% Chg Prev Month SAAR	-88.5	922.1	-97.0	423.3	-90.3	-93.8	1055.7	3903.7	-98.1	40.4	-97.8	8461.7	-81.9	1.9	7.9	-5.1
% Chg Same Month Last Yr	-13.39	-11.40	-2.69	18.15	42.65	-16.82	-18.25	-1.58	-10.08	4.99	-33.26	-8.87	12.03	1.24	7.86	-5.12

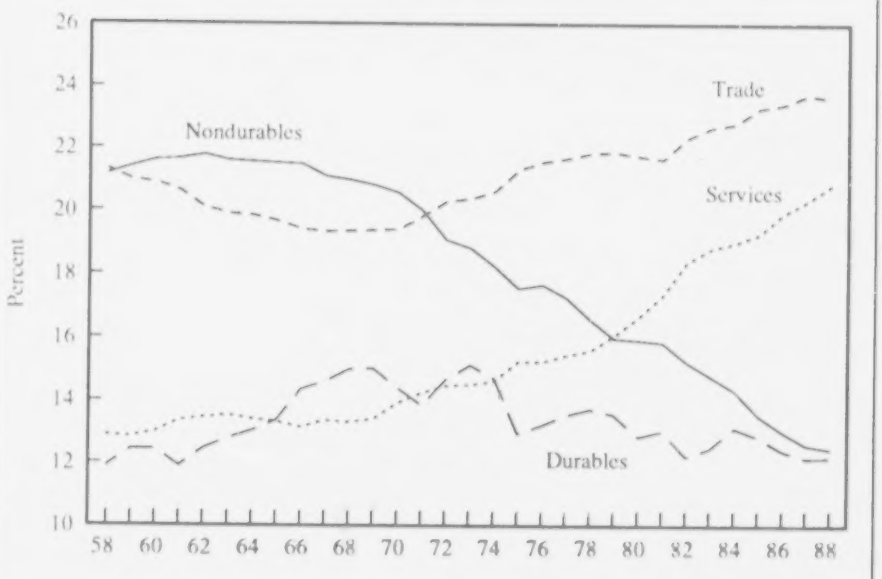
	86/III	86/IV	87/I	87/II	87/III	87/IV	88/I	88/II	88/III	88/IV	89/I	89/II	89/III	1986	1987	1988
US GNP (BIL $2 $) (1)	3712.4	3733.6	3783.0	3823.5	3872.8	3935.6	3974.8	4010.7	4042.7	4069.4	4106.8	4132.5	4158.1	3717.9	3853.7	4024.4
% Chg Prev Qtr SAAR	0.84	2.30	5.40	4.36	5.26	6.65	4.04	3.66	3.23	2.67	3.73	2.53	2.50	2.74	3.66	4.43
% Chg Same Qtr Last Yr	2.11	1.84	1.86	3.21	4.32	5.41	5.07	4.90	4.39	3.40	3.32	3.04	2.85	2.74	3.66	4.43
TN Personal Income (MIL $) (1)	$89397	$89310	$91188	$92154	$93301	$95370	$95586	$97182	$98592	70276	71348	72539	NA	$78870	$83003	$87909
% Chg Prev Qtr SAAR	7.83	8.40	13.27	8.48	7.99	13.73	1.32	10.09	8.66	10.19	8.23	8.98	NA	7.99	8.87	7.79
% Chg Same Qtr Last Yr	8.68	7.77	8.36	8.46	8.40	10.32	7.18	9.09	8.38	7.50	8.78	7.97	NA	7.99	8.87	7.79
TN Personal Income (MIL 82 $) (1)	$80813	$81218	$82039	$82143	$82932	$83670	$83540	$84223	$84830	$85554	$85739	$86886	NA	$80603	$82992	$84537
% Chg Prev Qtr SAAR	3.99	2.42	6.49	0.98	3.02	8.95	-0.97	8.20	4.55	5.39	1.34	1.08	NA	5.32	2.93	3.69
% Chg Same Qtr Last Yr	6.10	5.26	4.48	3.27	3.18	4.79	2.90	3.99	4.37	3.91	4.11	3.07	NA	5.32	2.93	3.69

1. Annual Rate.
2. Calculated From data provided by the Tennessee Department of Employment Security.
3. Source: Tennessee Valley Authority.
4. Source: The Conference Board.
5. Calculated From sales tax collections, provided by the Tennessee Department of Revenue.
6. Source: F.W. Dodge Division of McGraw-Hill Information Services Company.

Manufacturing

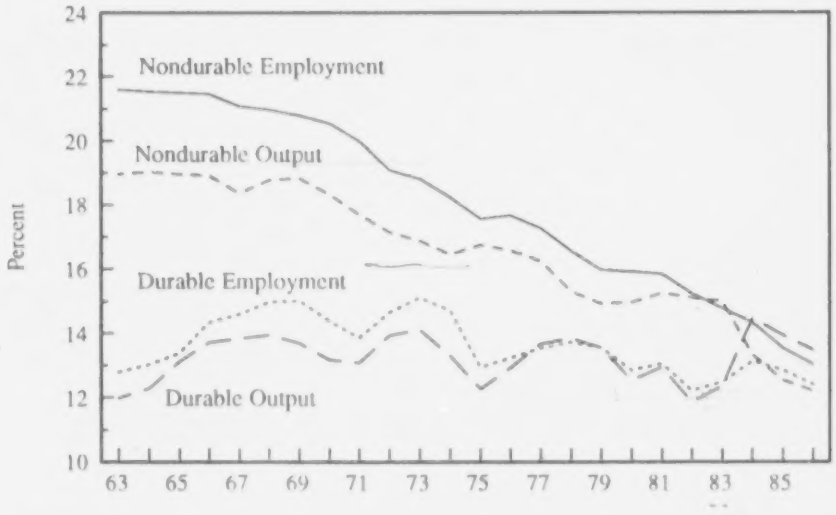
It is well known that relative employment has shifted away from manufacturing and toward the services and trade sectors in both Tennessee and the U.S. Figure 2.4 documents the magnitude of the change that has occurred in Tennessee, and reveals several interesting observations about Tennessee's industrial shifts. First, the change from manufacturing to services and trade is not a recent phenomena. It began in earnest in 1967 and has continued steadily for over twenty years. Second, the shift has occurred primarily in nondurable manufacturing. Durable manufacturing employs roughly the same proportion of people now as in the early 1960s, although it employed a larger proportion of Tennesseans during the interim. However, nondurable manufacturing decreased from a high of 21.8 percent of total nonagricultural employment in 1962 to only 12.4 percent in 1988. Nondurable manufacturing was a very large part of the Tennessee economy in the 1960s, but it is now about the same size as the durable manufacturing sector. Both of these sectors employed fewer people in 1988 than each of the trade, services, and state and local government sectors.

FIGURE 2.4
Tennessee Nonagricultural Employment
by Sector as a Percent of Total Employment



Output in Tennessee's manufacturing, services, and trade sectors has not shifted as dramatically as employment. Figure 2.5 shows that nominal durable manufacturing output grew as a proportion of total output over the

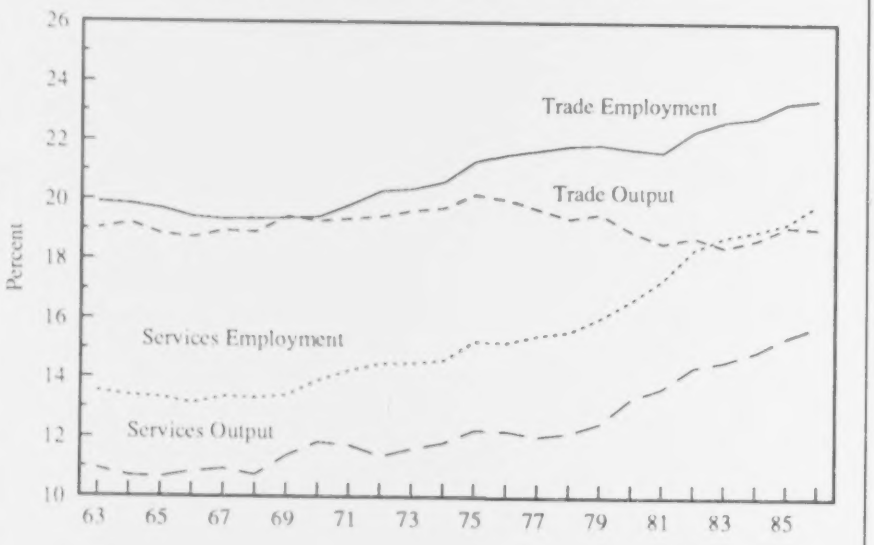
FIGURE 2.5
Tennessee Output and Nonagricultural Employment
as a Percent of Total Durables and Nondurables
(Output measured in nominal dollars)



same time period that employment remained fairly constant as a proportion of total employment. In nondurable manufacturing, both nominal output and employment decreased as a proportion of the totals, but employment fell faster until the mid-1980s. Since that time, output has fallen faster than employment. Interestingly, the proportions of employment in both durable and nondurable manufacturing were larger than the proportions of output produced by these sectors in the 1960s when productivity in manufacturing was below the statewide average. More recently, the proportions of employment and output in manufacturing have converged, and durable manufacturing now has above average productivity. Corresponding to this is a smaller increase in the proportion of total output produced by the services and trade sectors than the increase in the proportion of employment in these sectors, as shown in Figure 2.6. The gap between the proportions of employment and output has remained roughly constant in services, indicating that productivity is below average but holding steady in the services sector. However, the proportion of output produced by the trade sector has been constant while the proportion of employment in trade has increased, signaling decreasing productivity in trade.

More recently, although nondurable manufacturing experienced increasing employment after the recession in 1982, the sector never returned to pre-recession employment levels. A period of stagnation and losses in employment followed the initial post-recession recovery. This occurred

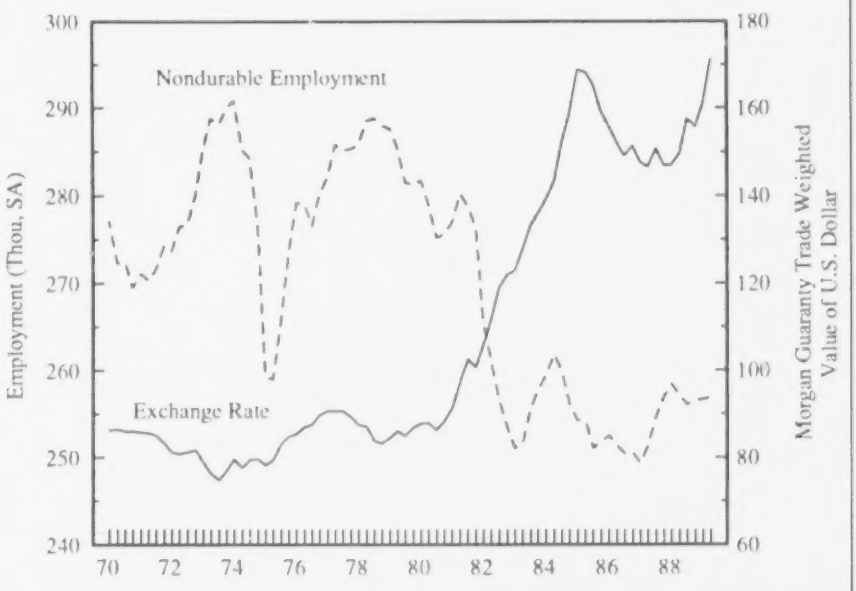
FIGURE 2.6
Tennessee Gross Product and Nonagricultural Employment
by Sector as a Percent of Total Services and Trade
(Output measured in nominal dollars)



during a time when the value of the dollar was increasing dramatically, as shown in Figure 2.7. The strong dollar has been a contributing factor to the stagnation in nondurable manufacturing, but it is not the only cause. When the dollar is strong, goods produced in the U.S. are more expensive to foreign purchasers, even though the domestic cost of production has not changed significantly. Hence, it is very difficult for domestic producers to compete internationally. Similarly, a strong dollar makes foreign-produced goods inexpensive to U.S. consumers, which is a boon to consumers but further erodes domestic producers' ability to sell their products. Nondurable manufacturing is particularly vulnerable to international competition because the products can be produced with relatively low-skill labor, so many countries with an abundance of low-skill labor, low wages, and weak currencies can engage in nondurable manufacturing. In Tennessee, nondurable manufacturing employment increased again in 1987, following a decline in the value of the dollar. However, some of the gains were lost in 1988, and employment growth has been stagnant since that time. This latest stagnation coincided with increases in the value of the dollar to record levels, but it is difficult to attribute the latest problems in nondurable manufacturing to the strong dollar, since exchange rate effects normally occur only with a lag.

One way Tennessee's manufacturers can respond to heightened international competition is through more intensive mechanization. The improved

FIGURE 2.7
Tennessee Nondurable Employment and U.S. Exchange Rate



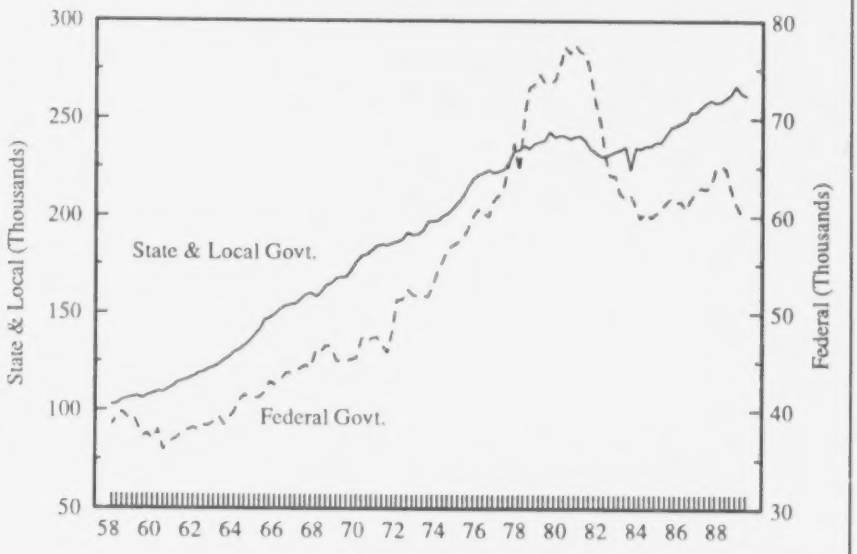
productivity in manufacturing discussed above is the result of structural changes in Tennessee manufacturing that utilize equipment more and labor less. This process is a natural and healthy part of the evolution of Tennessee's economy as firms within the state struggle to remain competitive. However, technological unemployment is created as a by-product of this process. Hence, to remain competitive in an environment that relies increasingly on mechanization, Tennessee must train its work force with the skills required by a more mechanized work place.

Government

Since 1980, federal civilian employment in Tennessee has decreased by over 17,000 jobs, as shown in Figure 2.8. The largest part of this federal cutback occurred during 1981 and 1982 and was predominately due to the scaling-back of the Tennessee Valley Authority's (TVA) nuclear construction program. More recently, TVA reduced its work force again, resulting in decreases in federal civilian employment of about 5,000 during 1988 and 1989.

Losses in federal employment represent structural shocks that ripple throughout the Tennessee economy and diminish economic activity in other sectors. Hence, to maintain economic growth, Tennessee's economy must overcome both the direct and multiplier effects of these shocks. At

FIGURE 2.8
Tennessee Government Employment

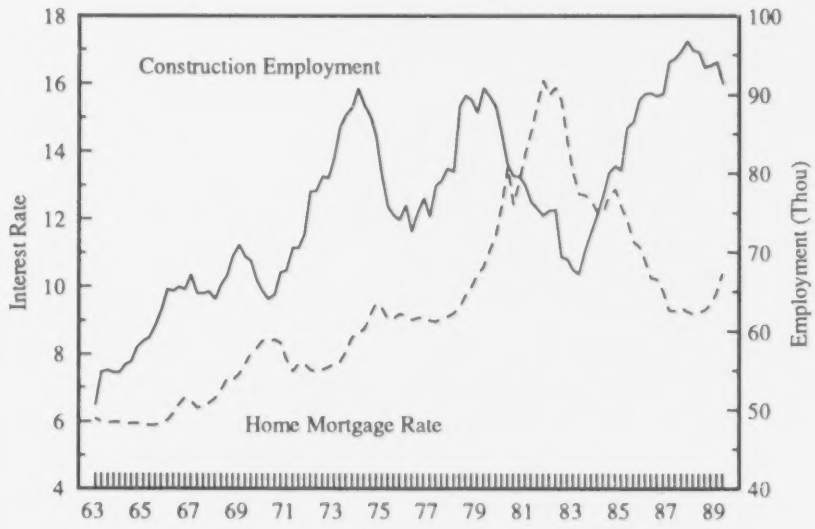


the beginning of this decade, reductions in federal civilian employment contributed to the severity of the 1982 recession in Tennessee. During 1988 and 1989, reductions in federal civilian employment have contributed to below-average employment growth in Tennessee, both directly and through the decreases in aggregate demand that accompany layoffs. The broadly-based slowdown documented above in Figure 2.1 testifies to the importance of the multiplied effects from basic weaknesses, like reduced federal employment.

Construction

Employment in the construction sector reached a peak of 96,700 in the fourth quarter of 1987. Since that time, construction employment has fallen 5,300 to 91,400 in the second quarter of 1989. There are three major causes for slower construction activity in Tennessee. First, Figure 2.9 shows that construction employment usually declines when home mortgage rates increase. Hence, decreases in construction employment in 1988 and 1989 are partially due to the recent increases in interest rates shown in Figure 2.9. Second, the tax reform act of 1986 removed preferential tax treatment from capital gains, thereby making real estate less attractive as an investment. Third, rapid growth in Tennessee's metropolitan areas in 1987 fueled construction activity. When this growth slackened, construction employment fell precipitously, especially in Knoxville and Memphis. This large swing in metropolitan area construction

FIGURE 2.9
Tennessee Construction Employment and U.S. Home Mortgage Rate



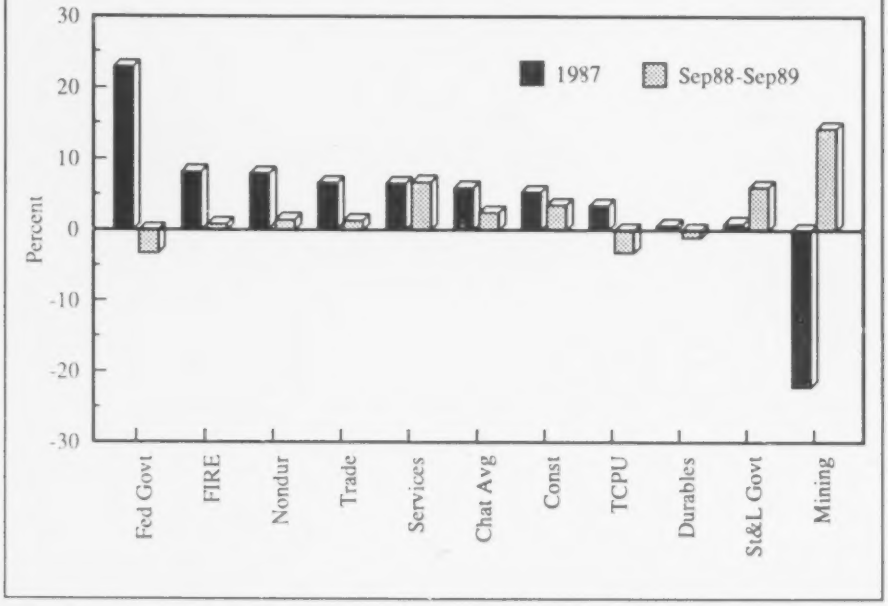
employment has adversely affected the statewide totals in the construction sector. Like other fundamental weaknesses in the economy, this decrease in construction employment had multiplier effects in the other sectors of the economy.

Regional Metropolitan Area Growth

Notably slower economic growth is occurring in Tennessee's four largest metropolitan areas. In the Chattanooga Metropolitan Statistical Area (MSA), nonagricultural employment growth fell from 5.9 percent in 1987 to 2.4 percent during the twelve-month period from September 1988 to September 1989. Memphis is similar, with employment growth falling from 4.7 percent to 2.0 percent between these time periods. Nashville had employment growth of 4.5 percent in 1987, but employment decreased slightly from September 1988 to September 1989. Knoxville also lost employment from September 1988 to September 1989, contrasted with 4.1 percent growth in 1987.

Figure 2.10 shows Chattanooga employment growth by industry for 1987 and the twelve-month period ending in September 1989. Part of the healthy growth in Chattanooga during 1987 resulted from a large increase in federal government employment. However, except for durable manufacturing, state and local government, and mining, the growth in Chattanooga

FIGURE 2.10
Chattanooga MSA Nonagricultural Employment Growth by Industry
1987 and 9/88-9/89



was broadly-based. Mining and state and local government improved during 1989, but employment growth in all other sectors of Chattanooga's economy except services has slowed.

The decline in Knoxville's employment growth by industry is shown in Figure 2.11. All sectors of Knoxville's economy except manufacturing grew vigorously in 1987. From September 1988 to September 1989 large decreases in construction, federal government, and manufacturing employment occurred. Federal government employment losses were almost exclusively due to reductions at the Tennessee Valley Authority and the shifting of TVA employment from Knoxville to Chattanooga. Other sectors of the Knoxville economy that lost employment were TCPU and state and local government. The only sectors with positive growth were services and trade, both of which exhibited substantially slower growth in the first three quarters of 1989 than during 1987.

Memphis employment growth by industry is shown in Figure 2.12. TCPU employment grew by over 9 percent in 1987, but increased by only 1.9 percent from September 1988 to September 1989. All other sectors of the Memphis economy have experienced slower growth recently except state and local government. Durable manufacturing employment growth declined from 5.0 to -2.5 percent between these two time periods, and

FIGURE 2.11
Knoxville MSA Nonagricultural Employment Growth by Industry
1987 and 9/88-9/89

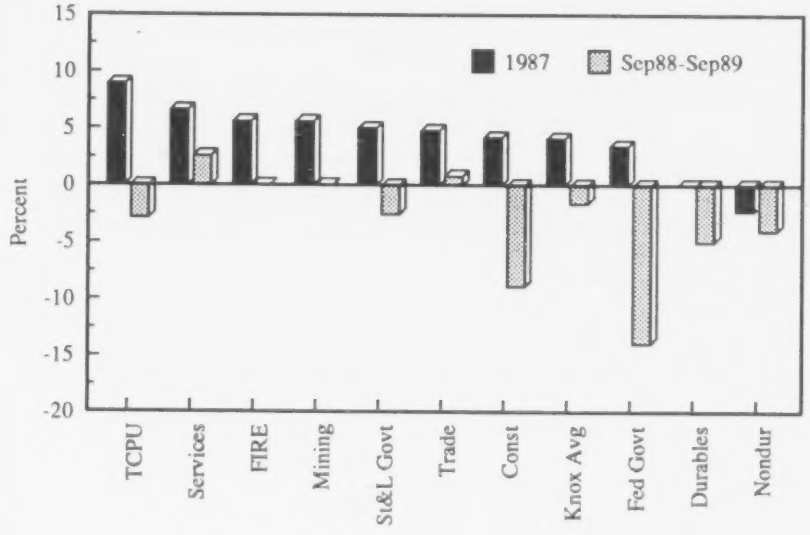
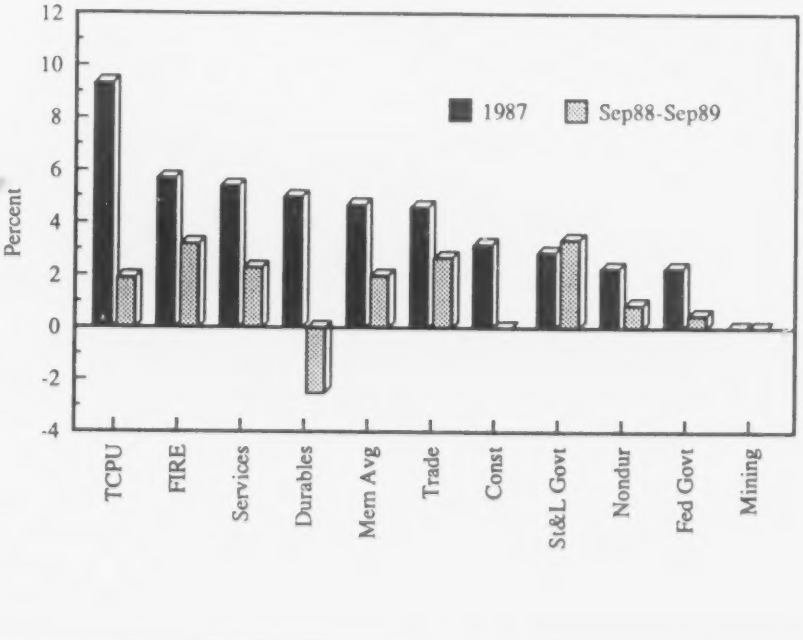


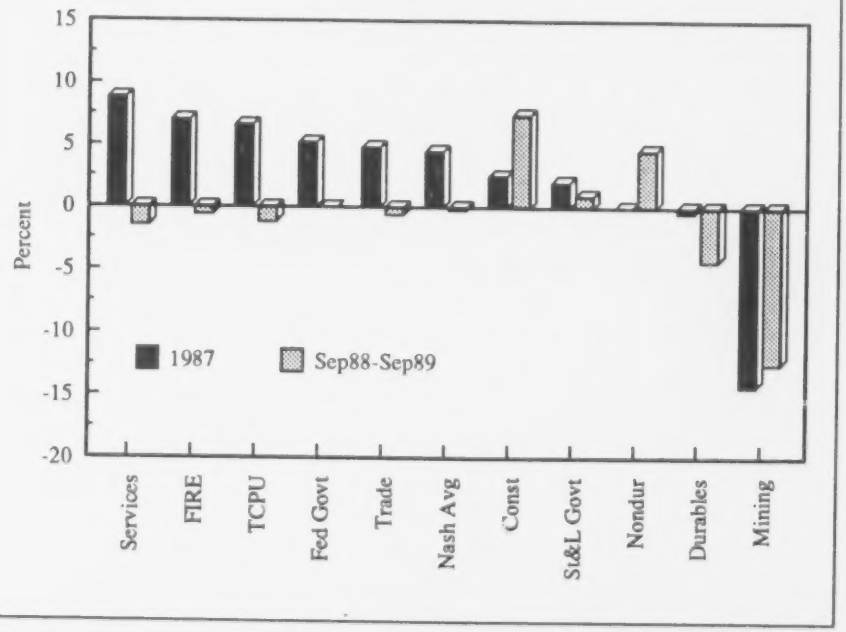
FIGURE 2.12
Memphis MSA Nonagricultural Employment Growth by Industry
1987 and 9/88-9/89



large declines occurred in the growth rates for FIRE, services, and construction sectors as well.

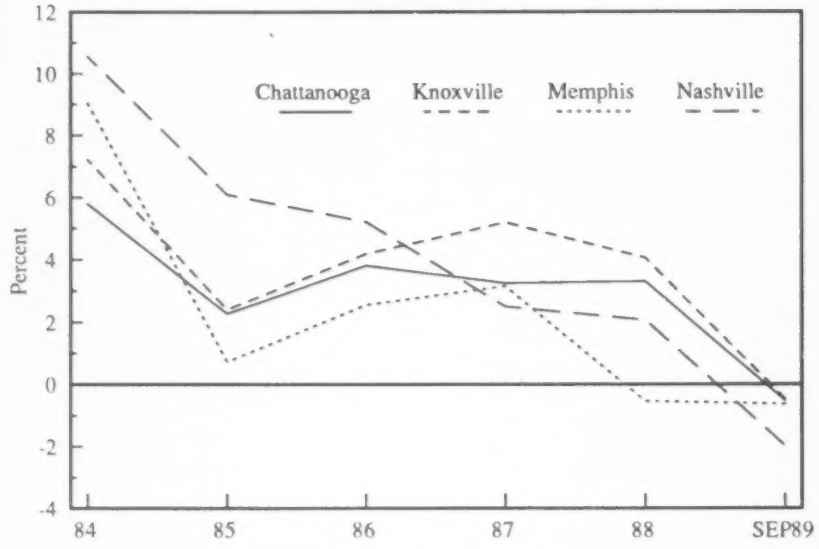
The widely-publicized growth rates for above-average economic growth in Nashville did not continue into the late 1980s, though this slowdown is most likely to be transitory because Nashville still has characteristics which are positive for growth. In 1987, both Chattanooga and Memphis had faster employment growth than Nashville. From September 1988 to September 1989, Nashville lost employment, as shown in Figure 2.13, while Chattanooga and Memphis still gained employment during this period. The services, FIRE, TCPU, trade, and durables, have all lost employment recently in Nashville. Growth in federal government employment also declined substantially between 1987 and the September 1988-September 1989 period. Only Nashville's construction, nondurable manufacturing, and mining sectors have had more rapid growth recently.

FIGURE 2.13
Nashville MSA Nonagricultural Employment Growth by Industry
1987 and 9/88-9/89



Another measure of regional economic growth for Tennessee's four largest MSA's is real sales growth, illustrated in Figure 2.14 for the Tennessee portion of MSAs. During the 1984-1987 period, healthy real sales growth was present in all four of the largest MSA's, although a slowdown occurred in 1985. Nashville had the highest growth rates in 1984, 1985, and 1986, but sales growth in Nashville declined steadily during these years and by 1987 Nashville had the slowest sales growth. Real sales

FIGURE 2.14
Tennessee MSA Sales Growth
1984-9/89
(1982 Dollars)



growth was either flat or declining for all four MSA's in 1988, with Memphis experiencing a substantial decline that resulted in negative real sales growth. The other three MSA's followed Memphis' lead during the September 1988-September 1989 period, when all four of Tennessee's largest MSA's had negative real sales growth.

Short-Term Forecast

The short-term outlook for Tennessee is problematic. Recent economic performance in Tennessee is weak enough to suggest that a recession could occur during 1990. However, most forecasters are not predicting a recession for the U.S., and the likelihood of Tennessee experiencing a recession without a U.S. recession is slim. It is possible for Tennessee to experience substantially slower growth than the national average without entering a recession, however, as has occurred in 1988 and 1989. Given the current environment, this appears to be the most likely outcome. Hence, the current short-term forecast for Tennessee predicts continued slow and sub-average growth for the state, but no recession. This scenario is predicated on no substantial deterioration at the national level. If the U.S. experiences slower-than-expected growth, or a recession, then Tennessee will almost certainly have a recession. Table 2.2 presents the forecast summary for 1989 and 1990.

TABLE 2.2
Selected U.S. and Tennessee Economic Indicators
(Seasonally Adjusted)

	HISTORY	FORECAST - DATA										ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
US GNP (BIL 82 $) SAAR	4106.8	4134.0	4157.7	4173.7	4187.4	4212.4	4237.5	4264.8	4285.7	4316.5	4343.9	4024.4	4143.1	4225.5
% CHG PREV QTR SAAR	3.73	2.68	2.31	1.55	1.31	2.41	2.40	2.61	1.97	2.90	2.56	4.43	2.95	1.99
% CHG SAME QTR LAST YR	3.32	3.07	2.84	2.56	1.96	1.90	1.92	2.18	2.35	2.47	2.51	4.43	2.95	1.99
US PERS CONS DEFL (1982=100)	128.0	129.8	131.1	132.6	134.1	135.6	136.8	138.3	140.1	141.9	143.7	124.5	130.4	136.2
% CHG PREV QTR SAAR	4.83	5.74	4.05	4.65	4.61	4.41	3.81	4.45	5.33	5.04	5.18	3.94	4.72	4.47
% CHG SAME QTR LAST YR	4.49	4.76	4.79	4.82	4.76	4.43	4.37	4.32	4.50	4.66	5.00	3.94	4.72	4.47
TN PERSONAL INCOME (MIL $) SAAR	71360	71692	72445	73446	74612	75862	77010	78254	80026	81589	83233	67243	72236	76435
% CHG PREV QTR SAAR	9.77	1.88	4.26	5.64	6.50	6.87	6.19	6.62	9.37	8.05	8.31	7.55	7.43	5.81
% CHG SAME QTR LAST YR	9.88	7.91	6.74	5.35	4.56	5.82	6.30	6.55	7.26	7.55	8.08	7.55	7.43	5.81
TN PERSONAL INCOME (MIL82$) SAAR	55750	55233	55261	55392	55641	55966	56285	56575	57109	57513	57937	54001	55409	56117
% CHG PREV QTR SAAR	4.71	-3.66	0.20	0.95	1.81	2.36	2.30	2.08	3.83	2.86	2.98	3.47	2.61	1.28
% CHG SAME QTR LAST YR	5.15	3.01	1.86	0.51	-0.20	1.33	1.85	2.14	2.64	2.77	2.93	3.47	2.61	1.28
US PERSONAL INCOME (BIL82$) SAAR	3373.3	3389.5	3409.7	3425.2	3438.9	3461.5	3481.0	3501.5	3522.9	3541.5	3556.4	3264.3	3399.4	3470.7
% CHG PREV QTR SAAR	8.07	1.94	2.40	1.83	1.62	2.65	2.27	2.38	2.47	2.12	1.70	3.51	4.14	2.10
% CHG SAME QTR LAST YR	4.65	4.30	4.10	3.53	1.95	2.12	2.09	2.23	2.44	2.31	2.17	3.51	4.14	2.10
TN NONAGRIC JOBS (THOUS)	2085.0	2077.6	2075.9	2082.5	2088.5	2095.3	2101.9	2109.3	2121.1	2133.5	2146.7	2065.9	2080.2	2098.8
% CHG PREV QTR SAAR	2.19	-1.41	-0.31	1.27	1.17	1.31	1.25	1.43	2.25	2.36	2.50	2.70	0.69	0.89
% CHG SAME QTR LAST YR	1.22	0.53	0.59	0.42	0.17	0.86	1.25	1.29	1.56	1.82	2.13	2.70	0.69	0.89
US NONAGRIC JOBS (MIL)	107.7	108.3	108.9	109.3	109.6	110.0	110.4	110.8	111.2	111.6	112.1	105.6	108.5	110.2
% CHG PREV QTR SAAR	3.34	2.41	2.06	1.46	1.18	1.39	1.46	1.50	1.46	1.62	1.63	3.31	2.80	1.51
% CHG SAME QTR LAST YR	3.19	2.98	2.74	2.32	1.78	1.52	1.37	1.38	1.45	1.51	1.55	3.31	2.80	1.51
TN UNEMPLOYMENT RATE (%)	5.8	5.3	4.8	5.3	5.6	5.7	5.7	5.6	5.5	5.5	5.4	5.8	5.3	5.6
US UNEMPLOYMENT RATE (%)	5.2	5.3	5.2	5.3	5.5	5.5	5.4	5.4	5.4	5.3	5.3	5.5	5.2	5.4
BANK PRIME INTEREST RATE (%)	11.0	11.4	10.7	10.5	10.3	10.0	10.0	10.0	10.0	10.3	10.2	9.3	10.9	10.1
TN MFG JOBS (THOUS)	511.6	510.8	512.2	513.3	515.1	515.4	515.9	516.0	517.4	518.8	521.1	508.2	512.0	515.6
% CHG PREV QTR SAAR	1.87	-0.62	1.07	0.88	1.42	0.26	0.38	0.09	1.02	1.16	1.75	2.16	0.73	0.72
% CHG SAME QTR LAST YR	0.64	0.59	0.91	0.79	0.68	0.91	0.74	0.54	0.44	0.66	1.00	2.16	0.73	0.72
TN MFG AVG WEEKLY HOURS	41.2	41.1	40.9	40.8	40.8	40.7	40.7	40.7	40.7	40.7	40.7	41.6	41.0	40.7
% CHG PREV QTR SAAR	-1.04	-0.96	-1.33	-0.84	-0.72	-0.32	-0.38	-0.13	-0.10	0.26	0.24	0.05	-1.44	-0.68
% CHG SAME QTR LAST YR	-2.09	-1.43	-1.19	-1.04	-0.96	-0.80	-0.57	-0.39	-0.23	-0.09	0.07	0.05	-1.44	-0.68
TN TAXABLE SALES (MIL $)	9944	9937	10111	10223	10356	10506	10643	10809	11021	11202	11399	38508	40216	42314
% CHG PREV QTR SAAR	8.4	-0.3	7.2	4.5	5.3	5.9	5.3	6.4	8.1	6.7	7.2	6.0	4.4	5.2
% CHG SAME QTR LAST YR	4.8	2.9	5.2	4.9	4.1	5.7	5.3	5.7	6.4	6.6	7.1	6.0	4.4	5.2
TN TAXABLE SALES (MIL 82$)	7769	7656	7713	7710	7723	7751	7779	7814	7865	7896	7934	30932	30848	31067
% CHG PREV QTR SAAR	3.4	-5.7	3.0	-0.1	0.6	1.5	1.5	1.8	2.6	1.6	1.9	2.0	-0.3	0.7
% CHG SAME QTR LAST YR	0.2	-1.8	0.4	0.1	-0.6	1.2	0.9	1.4	1.8	1.9	2.0	2.0	-0.3	0.7

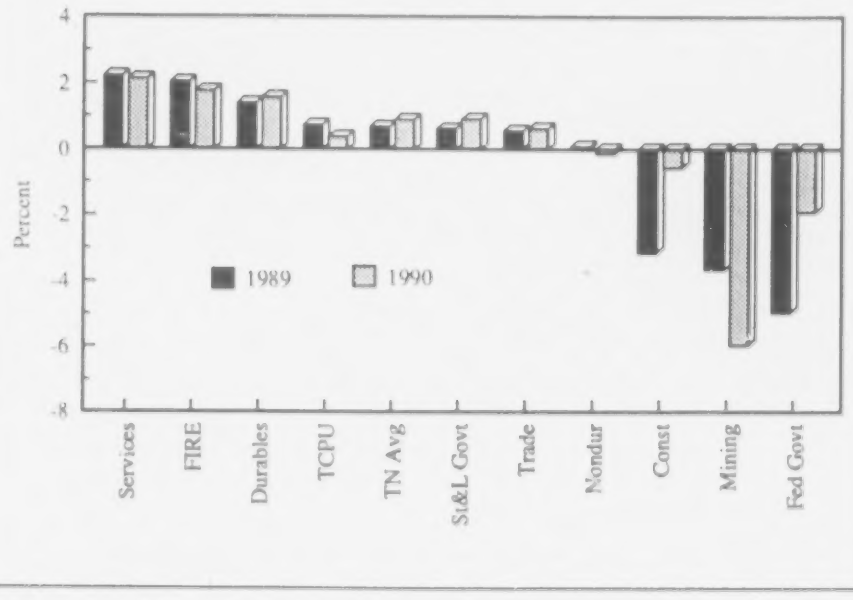
SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

Employment

Total nonagricultural employment growth will slow substantially in 1989 and 1990. After 2.7 percent employment growth in 1988, overall growth in 1989 will fall to 0.7 percent. Only a slight rebound will occur in 1990, with employment growth currently forecast at 0.9 percent. Moreover, part of the improvement in 1990 is due to the expected opening of the Saturn plant in Spring Hill, a one-time increase that overstates the underlying growth trend.

Figure 2.15 shows Tennessee employment growth by industry for 1989 and 1990. The slow growth and employment losses that have already occurred in the nondurable manufacturing, construction, and federal civilian sectors will continue through 1989 and into 1990. In addition, mining will lose employment, as it has every year since 1984. Services will witness the fastest employment growth in Tennessee, although the forecast growth rates of 2.2 and 2.1 percent for 1989 and 1990 are low for the services sector. Employment in FIRE is expected to grow by 2.1 and 1.8 percent in 1989 and 1990, respectively, which is also sluggish for the FIRE sector. Durable manufacturing employment is forecast to grow at relatively healthy 1.4 and 1.6 percent rates in 1989 and 1990, but these growth rates are still below the growth in durable manufacturing in 1987 and 1988. Moreover, as mentioned above, the 1.6 percent growth expected in 1990 is

FIGURE 2.15
Tennessee Nonagricultural Employment Growth by Industry
1989 and 1990



largely supported by the opening of the Saturn plant. Hence, the forecast underlying growth in durable manufacturing is slower than the growth exhibited by this sector in the recent past. Both the TCPU and trade sectors are forecast to have positive employment growth, but growth in these sectors will not exceed 1 percent during 1989 and 1990.

It is surprising that Tennessee's unemployment rate has remained low during 1989, despite decreases that have occurred in nonagricultural employment during some months. During the third quarter of 1989, the seasonally-adjusted civilian unemployment rate is expected to average 4.8 percent, the lowest level in 15 years. The reason for the apparent conflict between a low unemployment rate and negative employment growth is that both employment and unemployment have decreased during 1989, but unemployment has decreased faster, thereby driving the unemployment rate down. With both employment and unemployment decreasing, the total labor force must fall as well, and a declining labor force is not a sign of economic health. It represents a decrease in the size of the Tennessee economy as measured by the number of people participating in the economy. Hence, the low unemployment rate that Tennessee is enjoying during 1989 must be interpreted with caution. In the second quarter of 1989, Tennessee's civilian labor force declined by 5.5 percent at a seasonally-adjusted annual rate (SAAR), the largest quarterly drop in the labor force on record in the current labor force statistics. Thus, the apparent good news provided by the low unemployment rate belies the weak underlying economic activity.

The forecast for the Tennessee unemployment rate depends crucially upon the behavior of the labor force during 1989 and 1990. If the labor force increases suddenly without a commensurate increase in employment, then Tennessee's unemployment rate could abruptly jump upward. Without a sudden increase in the labor force, the unemployment rate will remain low despite the slow employment growth predicted for 1989 and 1990, although slow employment growth will probably push the unemployment rate up somewhat. The participation rate (the proportion of the population participating in the labor force) implied by a 4.8 percent unemployment rate in the third quarter of 1989 is 60 percent. Since this is the lowest participation rate since the 1983 recession, it is probable that the labor force will increase at least modestly, and this increase is reflected in the current forecast. This increase, coupled with slow employment growth, will drive the unemployment rate up to 5.3 percent in the fourth quarter of 1989. A slight increase to 5.6 percent is expected for 1990. While discouraging, these forecasted increases in the unemployment rate are mild, given the growth that the Tennessee economy is currently experiencing, and higher unemployment rates are a possibility if the labor force rebounds more rapidly.

Inflation

Inflation, as measured by the U.S. personal consumption deflator, was 3.9 percent in 1988. However, inflation accelerated during the year, and registered 4.8 percent at a SAAR in the first quarter of 1989. While inflation has moderated in recent months, this is expected to be a temporary decrease, and the current forecast calls for an increase in average annual inflation for 1989 to 4.7 percent. A weaker national economy in 1990 will result in slightly less inflation, with the personal consumption deflator growing by 4.5 percent.

Personal Income

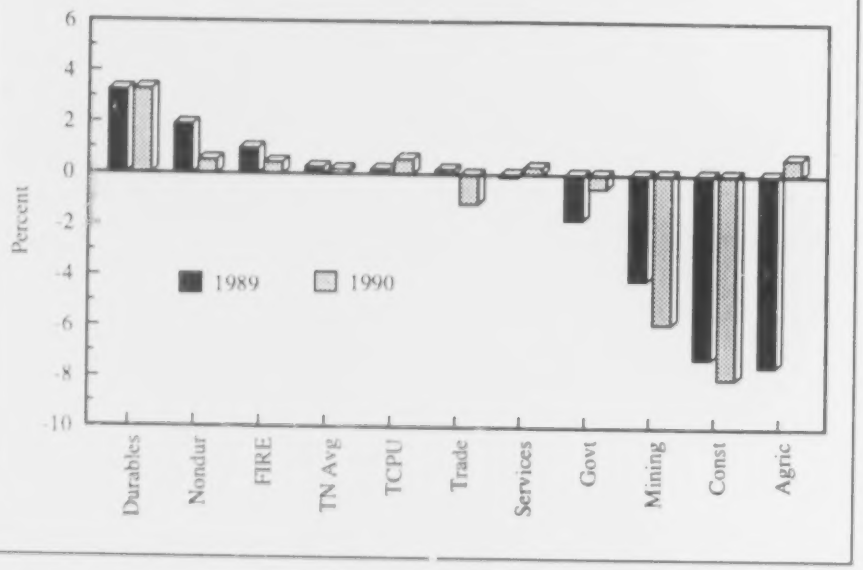
Nominal personal income in Tennessee grew at a very strong 9.8 percent SAAR in the first quarter of 1989. In real terms, the increase was 4.7 percent. This strong increase at the beginning of the year will enhance annual growth rates for 1989 even if income grows slowly for the remainder of the year. Commensurate with the decrease in employment that began in the second quarter of 1989, the forecast predicts a decrease in real personal income, although nominal income will still increase by 1.9 percent. Slow, but positive, income growth will prevail for the remainder of 1989. This combines with the rapid growth of the first quarter to produce an average annual growth rate of 2.6 percent for real personal income in 1989. This is a decrease from the real income growth of 3.5 percent in 1988, but nominal income growth will remain almost constant in 1989 due to higher inflation. Relatively slow real income growth will continue into 1990. Without the rapid increase at the beginning of the year that occurred in 1989, the slow growth rates in 1990 will combine to produce only 1.3 percent real personal income growth for the year. Moreover, with inflation expected to decrease slightly in 1990 due to a sluggish U.S. economy, nominal income growth will drop to 5.8 percent.

Output

Aggregate real gross state product (GSP) will grow very slowly in 1989 and 1990, but growth is expected to remain positive at 0.3 and 0.2 percent, respectively. Nominal GSP growth will slow as well, but higher inflation in most output sectors will dampen the slowdown. Nominal GSP is forecast to grow by 4.6 and 4.5 percent in 1989 and 1990, respectively. This is a substantial decrease from the 8.3 percent average compound annual growth rate of GSP from 1982 to 1988.

Figure 2.16 shows the prospects for real gross state product growth by sector in 1989 and 1990. Durable manufacturing will maintain relatively healthy growth, due largely to new plant openings and the increases in

FIGURE 2.16
Tennessee Output Growth by Industry
1989 and 1990



productivity experienced in this sector. This performance will not be mirrored by nondurable manufacturing, where growth will slow in both 1989 and 1990. The large FIRE, trade, and services sectors will all exhibit lethargic growth, while government, mining, and construction will experience real declines in output.

Sales

Nominal sales in Tennessee grew by 6 percent in both 1987 and 1988. The rapid income growth of the first quarter of 1989 resulted in increased consumption, and sales growth increased to a healthy 8.4 percent SAAR in the first quarter of 1989. However, this increase was short-lived, as nominal sales dropped 0.3 percent at a SAAR in the second quarter of 1989. The decrease occurred primarily in automobile sales and durable goods sales, although sales of nondurable goods also decreased substantially. Eating and drinking establishments suffered a decrease in sales in the second quarter of 1989 as well.

Sales growth for all of 1989 is forecast at 4.4 percent, a decrease from the 6 percent growth in 1988 but a substantial improvement over the second-quarter decrease. The 4.4 percent growth results from an expected rebound in sales in the second half of 1989, particularly in the third quarter. However, higher inflation in 1989 will combine with the weaker sales to produce a drop in real sales of 0.3 percent. In 1990, both nominal

and real sales will recover somewhat, despite lower inflation. Nominal sales are forecast to grow by 5.2 percent, with real sales growing by 0.7 percent.

Agricultural Outlook

1989: Year In Review

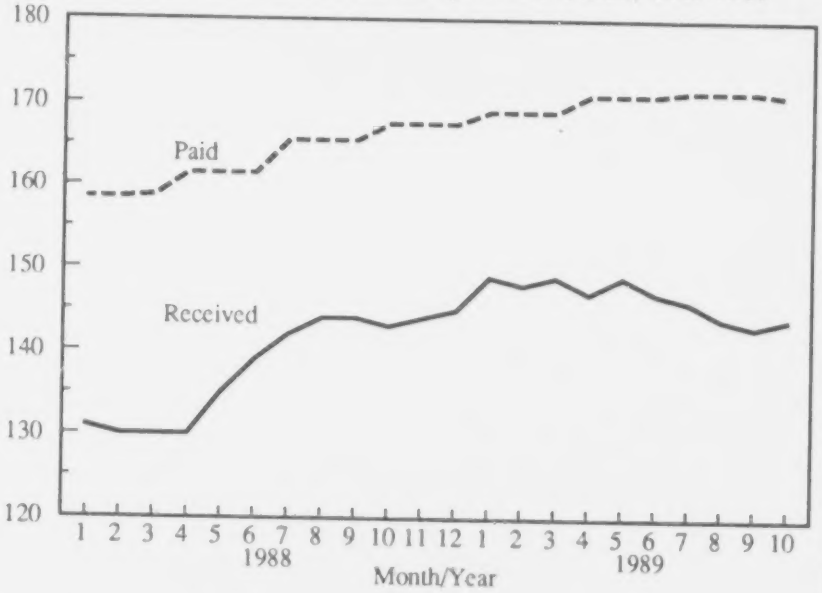
The 1989 crop year in Tennessee was characterized by substantial production and yield increases over drought-reduced 1988 levels. For example, U.S. burley tobacco production was up 17 percent, while acreage rose only 15 percent. U.S. corn production rose 54 percent. Total supply of soybeans was up approximately 15 percent nationally, with yields up 20 percent. Crop prices in general were stable or trended lower (see Figure 2.17), as production estimates early in the year predicted substantial increases in most crop supplies except cotton. Burley tobacco production in Tennessee increased moderately as variable weather conditions across the region resulted in wide quality ranges. In the livestock sector, cow/calf production remained profitable for Tennessee producers. Fed-beef production was less profitable, as was feeder pig and hog production, a result of higher feed prices.

The Importance of Agriculture in Tennessee

Although manufacturing and service industries have eclipsed the role of agriculture as the major employer in the state, the agricultural sector is still an important factor in the Tennessee economy. This is particularly true in the sparsely populated rural counties. Forty-two percent of Tennessee's land and 2.2 percent of its work force are directly engaged in the production of crops and livestock. In 1988, the agricultural sector employed an estimated 88,000 workers and produced $769 million in net farm income. (See Figure 2.18) An additional 30 percent of the land and 0.5 percent of the work force were occupied by the production and harvesting of timber and forest products. Tennessee ranks 28th among producers of agricultural products in the United States and 22nd in agricultural exports.

In 1988, the most recent year for which figures are available, the five most important agricultural commodities produced in Tennessee (beef cattle and calves, dairy products, soybeans, cotton, and greenhouse and nursery products) resulted in net cash receipts of $1.37 billion. Cash receipts for all agricultural production in Tennessee for 1988 totalled $2.05 billion, $965 million for crops and $1.09 billion for livestock. (See Figure 2.19) An estimated $700 million in timber and cut lumber sales were also contributed to the agricultural sector in 1988. However, the agricultural sector

FIGURE 2.17
Index of Prices Paid and Received by Farmers, U.S., 1988-1989



Source: Agric. Stat. Board, NASS, USDA, September, 1989.

FIGURE 2.18
Net Farm Income in Tennessee, 1982-1988

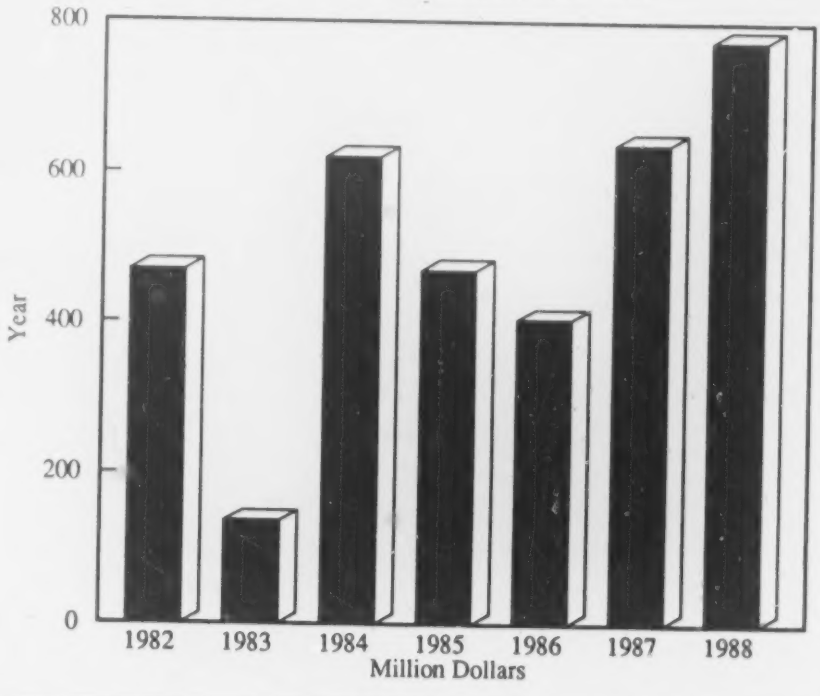
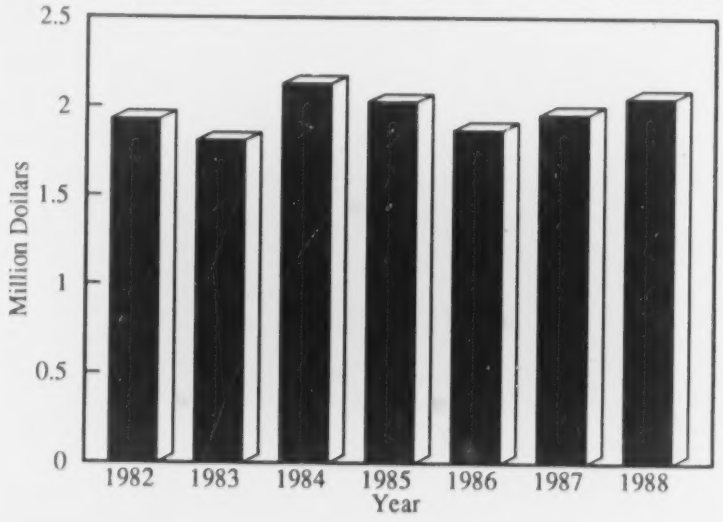


FIGURE 2.19
Cash Receipts for Agricultural Products in Tennessee, 1982-1988

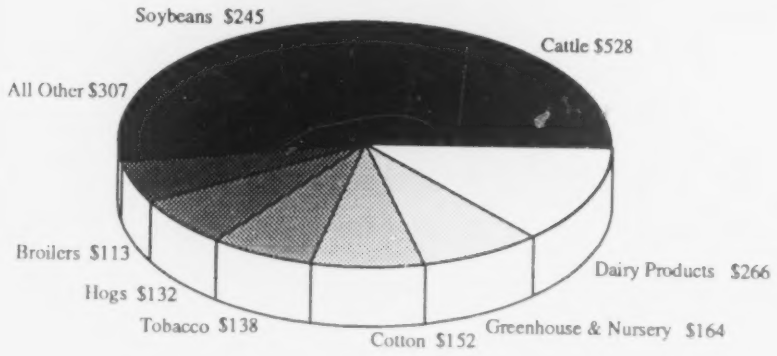


contributed significantly more to the Tennessee economy when links to the rest of the economy are included.

For example, crop production sales in 1988 netted Tennessee producers approximately $965 million. The commodities with the highest cash receipts were soybeans, tobacco, cotton, corn, and greenhouse and nursery products. Cash receipts from the sale of these five commodities in 1988 totalled approximately $760 million. Soybeans and cotton, produced primarily in West and Middle Tennessee, earned cash receipts in 1988 of $245 million and $152 million, respectively. Burley tobacco, grown primarily in Middle and East Tennessee, produced cash receipts of $138 million in 1988. Corn produced throughout the state in 1988 earned cash receipts totalling $58 million. Approximately 60 percent of this production was fed to livestock on the same farm where it was produced, resulting in an understatement of the economic value of corn production. Nursery crops are concentrated on the Cumberland Plateau and greenhouse products are grown primarily in Davidson, Hamilton, and Sullivan Counties. Cash receipts in 1988 from combined greenhouse and nursery production equalled $164 million. (See Figure 2.20)

In 1988, Tennessee's livestock producers earned cash receipts of $1.08 billion. Beef, dairy, and hog production, the principle livestock enterprises in the state, earned combined cash receipts of $927 million. This was approximately 86 percent of all cash receipts earned from the sale of livestock in Tennessee in 1988. Judged on the basis of cash receipts, beef cattle production is the most important agricultural activity in the state.

FIGURE 2.20
Leading Agricultural Products, Cash Receipts in 1988

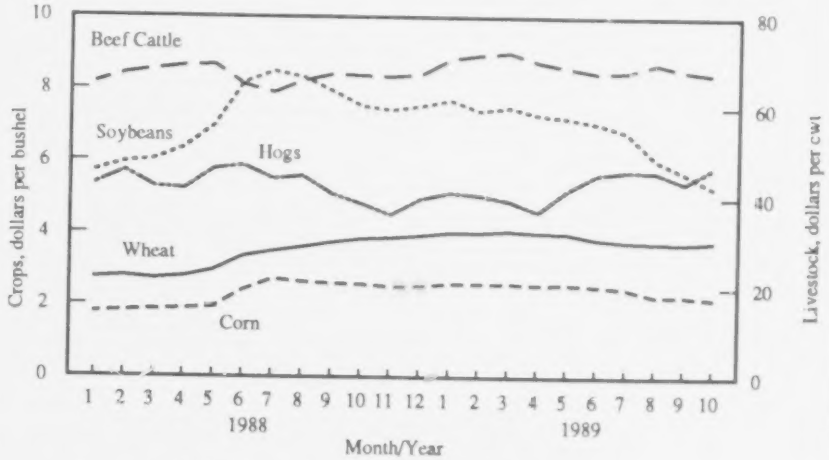


Figures are in million of dollars.
Total cash receipts in 1988 equaled 2.05 billion dollars.

Beef cattle production, concentrated in Middle Tennessee, produced cash receipts in 1988 of $528 million. Dairy production, concentrated in Middle and East Tennessee, earned cash receipts of $266 million. The production of hogs, which takes place almost exclusively in West and Middle Tennessee, produced cash receipts in 1988 totalling $133 million.

Forty-seven percent of the total land area in Tennessee is forested. Of that amount, 36 percent is owned by Tennessee farmers, 46 percent by

FIGURE 2.21
Crop and Livestock Prices Received by Farmers, U.S., 1988-1989



Source: Agric. Stat. Board, NASS, USDA, September, 1989.

other private owners, 9 percent by private industries, and 9 percent by state and federal government. The timber in Tennessee's forests is composed of approximately 85 percent hardwood, primarily oak, hickory, and poplar, and 15 percent softwood, principally loblolly and shortleaf pines. Tennessee produced 297 million board feet of hardwood lumber in 1984. The majority of this hardwood was used in the production of furniture and other wood products. Softwoods were used primarily in the production of pallets, wood chips, sawdust, and paper products. In Tennessee the forest products industry employs 51,000 workers and generates a payroll which exceeds $750 million.

The total value of crop, livestock and timber sales in Tennessee for 1988 is estimated to be $2.8 billion. Approximately 98,000 workers were employed by these enterprises for this same period. (See Figure 2.21.)

Soybeans. As soybean prices have declined through $6.00 per bushel this fall, on-farm storage has emerged as an attractive marketing alternative for Tennessee farmers, given the positive prospective demand situation. Although the new crop is approximately 15 percent larger than the 1988 crop, a 7-10 percent increase in domestic disappearance, coupled with a projected Brazilian acreage reduction, could push prices back above $6.00 per bushel early in the new year.

Corn/feed grains. While 1989 corn production was up over 50 percent, corn supply was only up 4 percent due to reduced stocks. Lower feed prices and continued strength in the beef market will result in an approximate 6 percent increase in corn use. Export commitments are presently 23 percent ahead of the 1988 pace, and total export volume will likely run 3-5 percent over levels of a year ago. Thus, Tennessee corn prices this fall and into next year should average slightly higher than expected earlier--in the $2.40-$2.50 per bushel range.

New crop outlook is less optimistic. A modest acreage increase, given recent trend yield levels, could result in production increases that would push prices next fall into the 2.00-2.15 range.

Wheat. Similarly, supplies in the wheat market will remain tight, as ending stocks decline to their lowest level in 15 years. Although national prices will remain in the $4 range, Tennessee farmers will likely receive less, due to quality discounts resulting from wet-weather damage. Outlook for the 1990 crop is that acreage will increase dramatically, due to higher prices to some degree, but mainly due to lower USDA set-asides requirements. The 1990 crop could be 25 to 30 percent larger than the 1989 crop,

pushing prices next fall to $2.50 per bushel. However, given low stocks, wheat prices in 1990 will be more volatile than normal, and in the event of lower-than-trend yields, prices next June could be expected near $3.50.

Burley tobacco. An under-utilization of the burley tobacco quota continues to be a problem for Tennessee producers. The 1989 effective quota was set 17 percent above 1988 level, but Tennessee burley producers responded with only a 5 percent acreage increase. A projected increase for 1989 will probably receive a similar response. Long-term, the result may be a fundamental change in the quota-growing system, a prospect beginning to find favor among industry leaders. Possible modifications include cross-county leasing, raising the acreage limitation for leased quota, or allowing the outright sale to burley tobacco quota. However, these changes are not likely for the 1989 crop year.

Cotton. The outlook for cotton has improved over the past year. A 14 percent increase in cotton usage, combined with a 23 percent decrease in production and a 25 percent increase in exports, should result in continued strength in cotton prices until late spring. Prices through June should fluctuate around the 70-75 cent-per-pound range. After that, new crop prices should begin to dominate the market, and the 1990 crop should be substantially larger than the 89 crop. If crop size increases by 30 percent, spot prices next September could easily fall within the 56-60 cent range.

Beef cattle. A good 1989 hay crop has resulted in a generally widening profit margin in the cow-calf market, while relatively high grain prices have squeezed profit margins in the fed-beef markets. Lower feed prices, reduced U.S. cattle slaughter numbers, and only a slightly larger U.S. herd size have all contributed to profits for cattle producers, but a 4 percent increase in replacement heifer numbers indicates than an expansion is underway. However, cow/calf operations are likely to continue profitable for several more years. Cow/calf producers in Tennessee can look forward to providing feeding calves in the $95-to-$100 per hundredweight (cwt) range by January or March of 1990, although considerable price fluctuation is to be expected at these levels.

Hogs. 1989 was a tough year for Tennessee hog and feeder pig producers, and inventories declined by 28 percent. The outlook for 1990 is not much improved, with prices continuing to range through the upper 30's and low 40's over the next six months. However, lower feed prices could improve the profit picture. The trend toward fewer and larger hog producers should continue, as large operators are able to take advantage of

considerable economies of size. Tennessee feeder pig producers can look toward prices in the $20-per-head range as lower slaughter numbers and relatively high feed prices continue to dominate the pork industry.

1990 Farm Bill Debate

Congress this fall and next spring will debate and enact the 16th farm bill since 1933, which will have direct impact on the farmers of Tennessee. While significant changes are possible, the probability is high that the 1990 bill will include an acreage reduction/price support package. The terms of the price support and acreage restriction provisions will impact either directly or indirectly on foreign trade, environmental issues, and rural development.

Acreage restrictions in the 1990 Farm Bill will probably move toward increased flexibility in planting decisions by farmers. Schemes to allow farmers to plant alternative crops without loss of program "base" acreage--the principle measure by which benefits are paid--seem promising. Several that are being discussed include:

(1) Triple Base Plan: Farmers are paid benefits on a reduced acreage that is separate from actual planted acreage. For example, a farmer with a 100-acre corn base under this plan might be able to plant 90 acres to maintain his/her "base," but can receive benefits on only 85 acres.

(2) Revised Acreage Reduction Program: "Base" would be calculated on a whole-farm basis, not in terms of individual crops. Farmers would be free to plant whatever they wished, up to set-aside limits, of any program crop without losing the "base" of any.

(3) Legislators are also likely to consider a "de-coupling" of farm programs. That is, farmers would receive the same level or payment regardless of plantings, so long as a total acreage restriction is observed.

Environmental issues of concern in the 1990 Farm Bill will likely center around erosion control on highly erosive cropland, the diversion of cropland to permanent vegetative cover, and the monitoring of agricultural chemical contamination of surface and ground water. A coupling of commodity programs to these environmental concerns is likely, with provisions likely for reducing erosion on set-aside land and encouraging permanent retirement of certain croplands into non-erosive uses. Programs to encourage tree plantings in some areas of the country also appear likely.■

CHAPTER 3

TENNESSEE'S LONG-TERM OUTLOOK

Short-term trends in the state's economy are often determined by national business cycle conditions, interest rates, value of the dollar, and other national economic conditions. The long-term scenario for the state also is affected by trends in the national economy, but the state's economic structure is a much more important determinant of its long-term economic picture. This chapter examines Tennessee's economic picture in the 1990s by first examining the state's economic structure. Then, the long-run forecast is reviewed.

Manufacturing industries have been in transition for many years, and one result has been that the percentage of employment had fallen to 24.6 percent by 1988, representing a decline that follows a national trend.

Structural Change in Tennessee

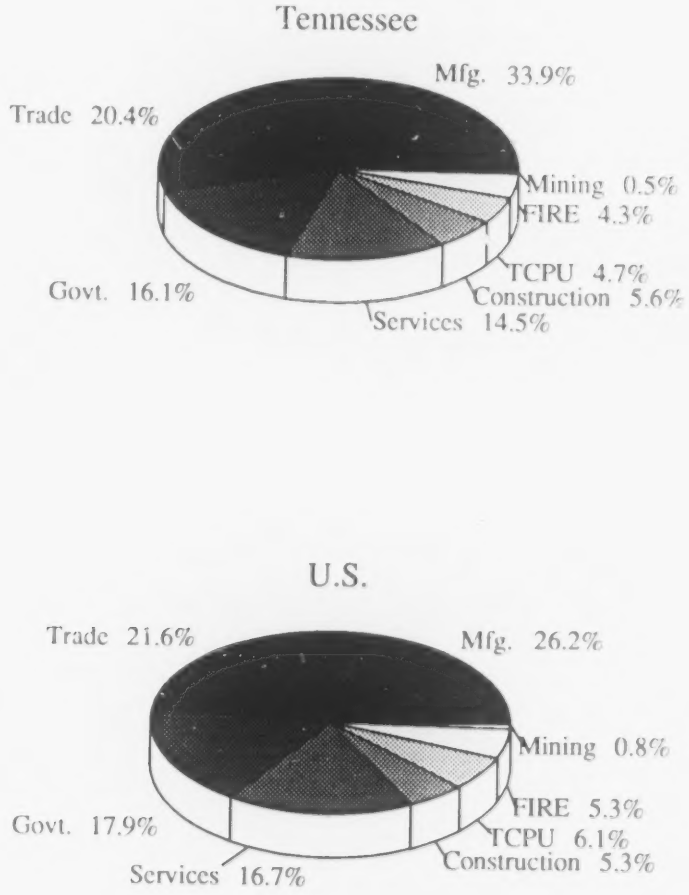
Manufacturing

Much has been written about the state's changing economic structure. Historically, Tennessee's economy has been characterized by a concentration in manufacturing employment. In fact, more than one-third of Tennessee's jobs were in manufacturing in 1973, compared with only 26.2 percent in the U.S. (see Figure 3.1). Most of Tennessee's manufacturing jobs have traditionally been in the nondurable industries such as the apparel, chemicals, printing and publishing, textile, and food industries. (Nondurable goods are products which have a life of less than three years.) Tennessee also has several large durable goods industries (producing goods with a life of greater than three years), including the fabricated metal and electrical and nonelectrical machinery industries. The transportation equipment industry has grown rapidly, with such visible locations as Nissan and Saturn, and currently employs about 33,000 people.

The manufacturing industries have been in transition for many years, and one result has been that the percentage of employment had fallen to 24.6 percent by 1988 (see Figure 3.2). The pattern in Tennessee of a declining percentage of employment in the manufacturing sector has followed a national trend. Manufacturing was only 18.4 percent of U.S. employment during 1988. However, the relative decline in the national share of employment in manufacturing has been slightly larger than Tennessee's.

This transition potentially has important implications for rural areas since many rural counties have more than one-half of their employment in manufacturing. Surprisingly, much of the employment decline has been in

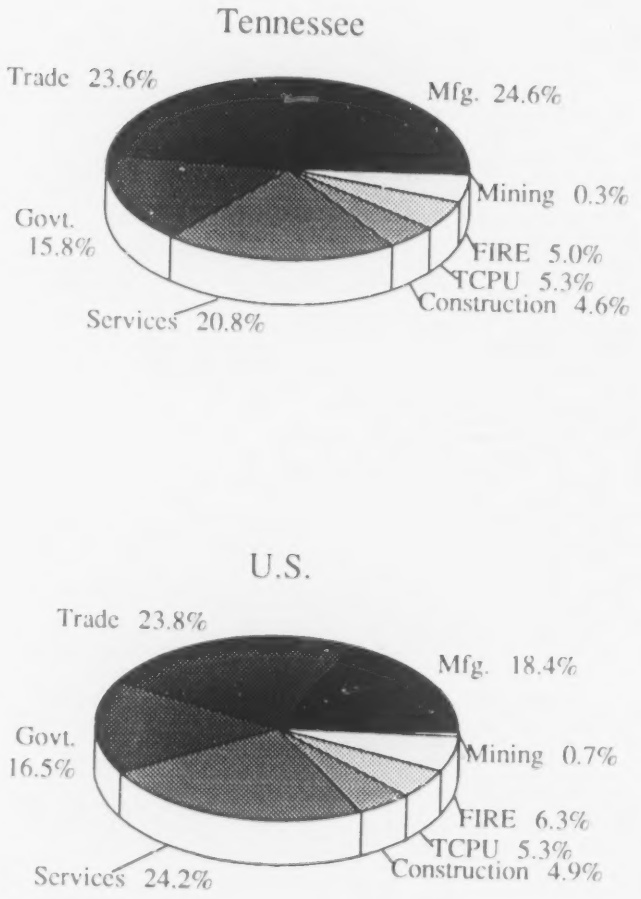
FIGURE 3.1
Nonagricultural Job Distribution, 1973



the metropolitan areas. Declines of a similar magnitude would devastate some rural counties. Still, many rural economies are closely tied to manufacturing and have experienced slow growth since this industry has not been generating jobs on net.

From the perspective of the manufacturing industry as a whole, several types of transitions have been underway. First, there have been job losses, some of which are related to long-term decline in the importance of specific industries in Tennessee. Among the nondurable industries, the

FIGURE 3.2
Nonagricultural Job Distribution, 1988



largest employment losses since the mid-1970s have occurred in the chemicals and leather goods industries, though the tobacco, textiles, and apparel industries have also lost employment. The stone, clay and glass, and primary metal durable goods industries have experienced employment declines as well. During the 1970s, manufacturing employment grew because the growing industries offset the declining industries, but manufacturing declined as a share of the economy.

Another transition has been development of new production techniques which have arisen because of emerging technologies allowed by better computers and telecommunications. In many situations the new technologies have been associated with employment losses or smaller employment gains. Still, implementation of new technologies is essential to a productive and vital manufacturing sector in Tennessee. The resulting productivity gains from better technology allowed the percentage of Tennessee output in manufacturing to grow from 27.7 percent in 1973 to 28.8 percent in 1988. Thus, in a relative sense, output from the manufacturing sector has been growing as employment has been falling.

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Another major change has been the downsizing of manufacturing firms as they seek more flexibility in their operations. As a result, the percentage of Tennessee businesses in manufacturing grew from 7.0 percent in 1972 to 7.2 percent in 1985, despite the declining share of employment in manufacturing. This occurred as the average employment size of the firms declined. As noted above, these firms are increasingly more productive.

The above changes indicate that the manufacturing firm of the 1990s will look very different from its predecessors. It will find traditional location determinants to be less important, and in fact will have fewer constraints on its location decisions. Information and transactional services, such as legal and financial, will be much more important. It will be less tied to available labor, because less is used. However, it will be more dependent on quality labor, because new technologies require workers who can learn across their lifetimes. It will be more flexible, able to adjust quickly to new markets and demands, and yet be more productive. Manufacturing will remain a strong industry provided Tennessee delivers the services and labor needed.

The service and retail and wholesale trade sectors have become the sources for new jobs, as the manufacturing sector has ceased to be a generator of jobs. The share of jobs provided by each has risen dramatically since 1973 (see Figures 3.1 and 3.2). A partial reason for their growth is increased specialization in the activities performed by manufacturing firms, which has meant that manufacturing firms now purchase some services (such as legal services) which would formerly have been performed in-house. Also, the use of temporary employment agencies has shifted some employees onto the payroll of service rather than manufacturing firms. Still, research indicates that the purchase of services that formerly would have been performed in-house is not a major reason for the shift in manufacturing employment.

Many of the new service sector jobs have been in relatively high-paying industries such as health care, legal, and business services. These generally rely on well-educated employees. There also has been job growth in trade and service industries which demand lesser-skilled, lower-wage workers. Often these industries have compensating advantages as they allow flexible hours and work conditions which make them attractive for younger and older workers.

Two other sectors with changing employment shares should be noted. Financial services represented by the finance, insurance, and real estate (FIRE) sector have expanded in a similar, though less spectacular, fashion than the service sector. Government's employment share has declined, caused by declines in federal government. Federal government employment reached 4.4 percent of the state's employment at the height of the TVA nuclear construction program and has fallen to 2.7 percent as the program has been winding down.

Long-Term Forecast

Table 3.1 is an overview of the long-term forecast for the years 1990 through 1998. The forecast values beyond 1991 should be interpreted as trends rather than the specific results expected for each year. This is because it is not reasonable to predict the timing of business cycles beyond the current cycle. Thus, though it is likely that a recession would occur sometime during the forecast horizon, none is included in the current estimates. A deviation from the trends reported in the tables would be expected during the recession and subsequent rebound, but the average should be in line with the forecast. The following is a discussion of some of the forecast results. The long-term forecast is generally described below as a forecast of the 1990s, though it actually ends in 1998.

Employment

The long-term employment forecast is based on an expectation that much of the structural change of the 1980s is over. A slight acceleration of employment growth is expected as a result, with employment growth at a compound annual rate of about 1.9 percent annually. Still, employment growth rates cannot be expected to return to the robust levels of the 1960s and 1970s. The most important reason is that labor force growth will be too slow, as the number of young people and women entering the labor force is slowing.

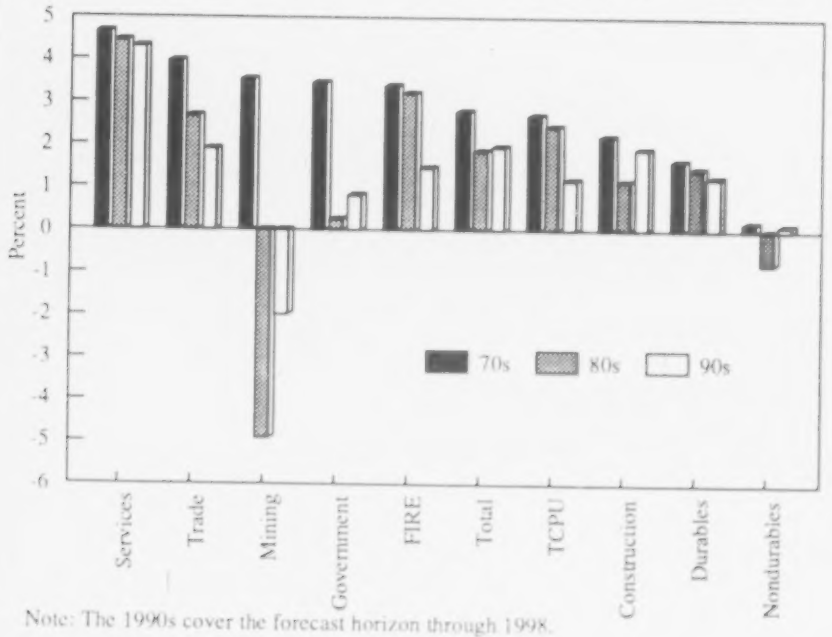
The service sector will continue setting the pace for employment expansions in the 1990s (see Figure 3.3). As before, the better increases will be

TABLE 3.1
Tennessee Selected Indicators

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TN GROSS STATE PRODUCT (MIL. DOL.)..	87850	91806	99041	105971	113430	121907	130461	139529	148876	158939
PERCENTAGE CHANGE.....	4.57	4.50	7.88	7.00	7.04	7.47	7.02	6.95	6.70	6.76
TN GROSS STATE PRODUCT (MIL 82 $)...	70215.7	70342.1	72855.9	74798.8	77610.7	80337.5	82827.6	85223.8	87422.7	89746.5
PERCENTAGE CHANGE.....	0.27	0.18	3.57	2.67	3.77	3.50	3.10	2.89	2.58	2.66
US GROSS NATIONAL PRODUCT (BIL 82 $)	4142.7	4225.5	4329.5	4454.7	4574.1	4696.0	4809.2	4925.0	5034.7	5155.2
PERCENTAGE CHANGE.....	2.94	2.00	2.46	2.89	2.68	2.66	2.41	2.41	2.23	2.39
TN PERSONAL INCOME (MIL. DOL.).....	72236	76435	82445	88321	95189	102207	109443	117317	125771	134735
PERCENTAGE CHANGE.....	7.43	5.81	7.86	7.13	7.78	7.37	7.08	7.19	7.21	7.13
TN PERSONAL INCOME (MIL 82 $).....	55396.6	56116.5	57733.3	58768.8	60542.8	62054.1	63483.5	64952.8	66429.7	67922.6
PERCENTAGE CHANGE.....	2.54	1.30	2.88	1.79	3.02	2.50	2.30	2.31	2.27	2.25
US PERSONAL INCOME (BIL 82 $).....	3399.1	3471.0	3550.2	3640.2	3711.5	3791.0	3868.3	3949.7	4026.0	4108.9
PERCENTAGE CHANGE.....	4.10	2.12	2.28	2.53	1.96	2.14	2.04	2.11	1.93	2.06
TN EMPLOYED PERSONS (THOUS).....	2233.4	2252.5	2290.5	2323.1	2361.4	2383.4	2418.8	2457.9	2495.3	2529.2
PERCENTAGE CHANGE.....	0.88	0.86	1.69	1.42	1.65	0.93	1.49	1.61	1.52	1.36
US EMPLOYED PERSONS (MIL).....	117.5	118.8	120.7	122.8	124.5	126.1	127.3	128.9	130.2	131.8
PERCENTAGE CHANGE.....	2.16	1.19	1.52	1.76	1.43	1.27	0.97	1.21	1.04	1.20
TN UNEMPLOYMENT RATE.....	5.3	5.6	5.4	5.2	5.0	5.1	5.1	5.0	5.2	5.0
US UNEMPLOYMENT RATE.....	5.2	5.4	5.3	4.9	4.7	4.6	4.8	4.7	4.8	4.7
IMPLICIT DEFLATOR,GSP.....	125.1	130.5	135.9	141.7	146.1	151.7	157.5	163.7	170.3	177.1
PERCENTAGE CHANGE.....	4.29	4.32	4.16	4.22	3.15	3.84	3.80	3.94	4.02	4.00
IMPLICIT DEFLATOR,GNP.....	126.7	132.6	138.6	145.0	151.1	157.7	164.5	171.7	179.4	187.4
PERCENTAGE CHANGE.....	4.47	4.65	4.53	4.65	4.18	4.38	4.36	4.37	4.47	4.45
TN MFG OUTPUT/EMPLOYEE (THOUS 82 $).	40.4	41.0	42.6	44.0	46.4	48.7	50.7	52.5	54.5	56.6
PERCENTAGE CHANGE.....	1.96	1.43	3.86	3.33	5.49	4.85	4.05	3.69	3.74	3.89
US MFG OUTPUT/EMPLOYEE (THOUS 82 $).	47.4	48.8	50.4	52.4	53.4	54.9	56.6	58.4	60.3	62.2
PERCENTAGE CHANGE.....	2.87	3.01	3.38	3.84	2.00	2.85	3.06	3.13	3.20	3.15
TN PER CAPITA INCOME ($).....	14637	15361	16434	17458	18614	19879	21088	22374	23746	25219
PERCENTAGE CHANGE.....	6.55	4.95	6.98	6.23	6.62	6.79	6.09	6.10	6.13	6.20
TN POPULATION (THOUS.).....	4935	4976	5017	5059	5114	5142	5190	5244	5296	5343
PERCENTAGE CHANGE.....	0.82	0.82	0.82	0.84	1.08	0.54	0.94	1.04	1.01	0.87

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

FIGURE 3.3
Tennessee Nonagricultural Job Growth by Decade, 1970-1998



Note: The 1990s cover the forecast horizon through 1998.

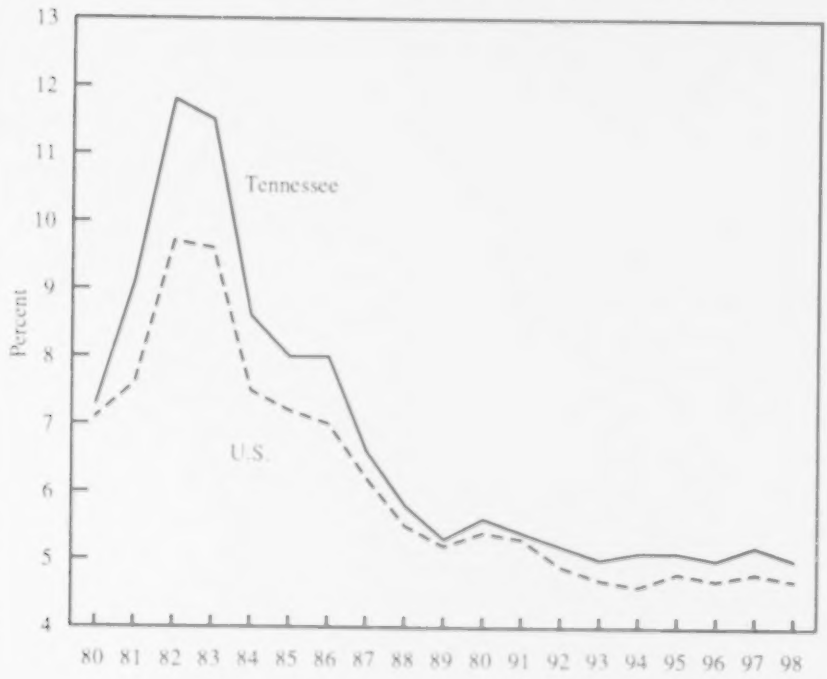
Employment growth rates cannot be expected to return to the robust levels of the 1960s and 1970s. The most important reason is that labor force growth will be too slow, as the number of young people and women entering the labor force is slowing.

in industries which require better training and which offer better salaries. Wholesale and retail trade also will be relatively strong in coming years, though slowing from previous decades. This is partly the result of weaker income growth during the next decade. Construction employment is expected to perform better in the 1990s, partly because the decade starts with the declines from the late 1980s. Construction employment will not reach the 1987 peaks until around 1994. Government employment will grow better, but still at less than one-half the rate of all employment growth. The FIRE sector will expand more slowly as mergers trim some firms' employment and as firms in other industries become more competitive with products offered by the FIRE sector. Drawing the lines between firms in financial industries and others will be increasingly difficult. A prime example is Sears, with a bank, insurance company, broker, and credit card subsidiary.

Employment growth of about 1.2 percent annually is forecast for durable goods manufacturing. Fabricated metals and transportation equipment are forecast to have the highest growth rate. Saturn and Nissan will both have significant employment expansions at the beginning of the decade. Nondurable goods are anticipated to maintain employment in the 1990s. This is a slight improvement compared with the 1980s, when employment actually fell. However, this occurs because the expansions of

printing and publishing, paper, and rubber and plastics offsets the expected declines in chemicals, leather, apparel, and textiles, and because chemicals and leather are not expected to shrink as dramatically.

FIGURE 3.4
Tennessee and U.S. Unemployment Rates, 1980-1998



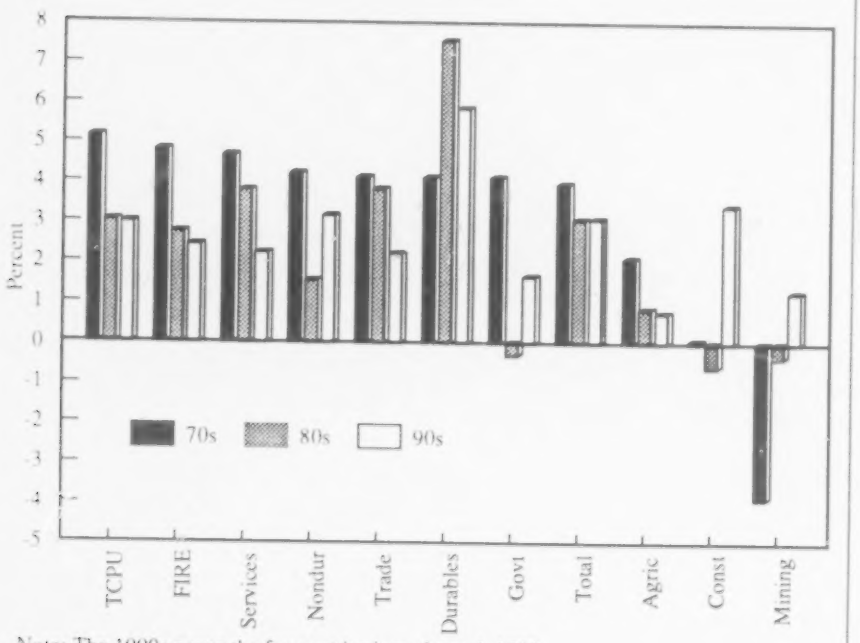
The labor force is expected to grow about 1.4 percent annually during the 1990s. Employment growth will be slightly faster than labor force growth, so the unemployment rate will fall slowly across the decade. Even though the unemployment rate is expected to rise over the next year to about 5.6 percent, it should fall to about 5.0 percent by the end of the decade (see Figure 3.4). Tennessee's rate will be approximately at the U.S. rate in the 1990s, after spending most of the 1980s well above the U.S. rate (see Figure 3.4). Also, the unemployment rate will remain low relative to most years in the 1980s. The main reason is that members of the maturing labor force (because of an aging population and modest increases in the labor force) will have closer linkages to their jobs and will remain unemployed less. Thus, the "full employment unemployment rate" will be falling over the next decade.

Gross State Product

GSP will grow faster than employment because of productivity increases. Output will rise at a compound annual rate of 3.1 percent, with employment accounting for 1.9 percent and productivity gains accounting for 1.2 percent. This means that the productivity gains of the next decade will be approximately the same as those for the last decade.

No sector is forecast to experience declines in output growth during the 1990s, though mining, construction, and government had declines during

FIGURE 3.5
Tennessee Real Gross State Product Growth by Decade, 1970-1998



Note: The 1990s cover the forecast horizon through 1998.

the 1980s (see Figure 3.5). Manufacturing, which will continue to benefit from new technologies, will exhibit the most rapid output increases. Implicit in this forecast is the expectation that durable goods industries will experience a 4.1 percent annual gain in productivity, and nondurable goods industries will have a 3.0 percent gain in productivity. The construction sector, after very weak performance in the 1980s, is anticipated to have very strong output growth. Agriculture, government, and mining will have the weakest output increases.

Economic forecasts are attempts at forecasting an economic environment for a given set of policies. The economy can be changed with a different set of policies. Employment will be unable to grow much faster than the projections of the previous section because of the limitations of demographic trends. There will not be enough workers to allow rapid employment growth, though increases can be realized, for example, through policies designed to attract more senior adults or AFDC recipients into the labor force. The best prospect for stimulating stronger growth in Tennessee's economy than is forecast here lies in achieving better productivity growth. Several options exist for productivity improvements, and it should be noted that some improvements in these areas were anticipated in the forecast. First, a more highly skilled labor force will be more productive. Investments in providing existing workers with enhanced skills through literacy programs and job-specific training programs offer considerable prospects for enhancing worker productivity. An improved education system will be essential to allow entrants in the work force to have better general skills and to become the lifetime learners essential in today's flexible, changing firms. Second, a higher quality infrastructure for Tennesseans to work with is essential. The telecommunications, highway, and water and sewer systems must be able to meet business needs of the 1990s. The emphasis in the future will be on the quality rather than the availability of the infrastructure. Finally, Tennessee businesses must have access to appropriate technology and programs designed to help them implement technology. Production methods are changing too rapidly for many firms to stay abreast of new techniques. The state has a vested interest in ensuring that its firms use the appropriate technology to remain competitive.

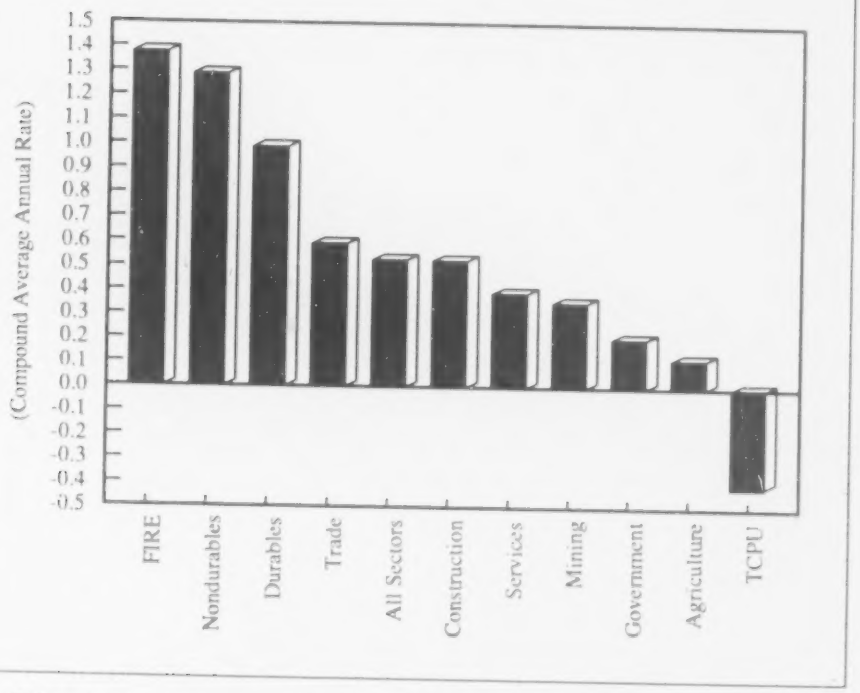
Investments in providing existing workers with enhanced skills through literacy programs and job-specific training programs offer considerable prospects for enhancing worker productivity.

Personal Income

Personal income is forecast to rise at a 7.3 percent annual rate during the 1990s. Much of this growth is the result of inflation and population change. The growth rate of personal income is 1.5 percent annually when the effects of inflation and population are subtracted. This figure represents the annual growth in Tennessee's well-being. This is somewhat lower than in the past decade, but the differences are in areas such as proprietor's income and transfer payments.

About 61 percent of personal income comes from wage and salary payments, which are forecast to grow 7.3 percent annually, or at a compound annual growth rate of 0.5 percent in per capita real terms--approximately the same as during the 1980s. Wages will grow most rapidly in the financial, manufacturing (durables and nondurables) and trade sectors (see Figure 3.6).

FIGURE 3.6
Tennessee Growth in Real Average Annual Wages, 1990-98



Other labor income, which includes fringe benefits, is 7.6 percent of total compensation for labor (wages, salaries, and fringe payments). Other labor income has grown much more rapidly than wages during the 1980s, but the growth rate of fringe benefits is expected to slow during the coming decade. One reason is that lower federal income tax rates means there is less incentive to take wages in forms other than taxable wages. Another reason is that the base of taxable income has been changed so that it is more difficult to avoid taxes by taking income through fringe benefits.

The most rapid growth rate will be in rents, interest and dividends, which will rise 7.8 percent annually. Proprietor's income is predicted to grow 7.1 percent annually. Transfer payments, which are payments for which no service is required, such as social security and welfare, are forecast to slow somewhat, to a 7.4 percent annual increase. ■

CHAPTER 4

THE EUROPEAN COMMUNITY, 1992: IMPLICATIONS FOR TENNESSEE*

Tennessee's linkages to the international economy are strong and growing. Recent rapid increases in U.S. export and import trade have had important effects on the state economy, as has the influx of foreign direct investment. For example, in 1987 (the most recent year for which data are available), foreign direct investment in Tennessee directly accounted for nearly 80,000 jobs.[1] The international sector also has become the focal point for concerns regarding the competitiveness of U.S. and Tennessee business and industry.

Although the emergence of an integrated European market holds great promise for American producers, it also portends significant structural changes for the U.S. which in the short run may threaten to weaken the position of domestic producers.

An important transformation is underway in Western Europe that may alter dramatically the existing nature of international trade. The 12 countries comprising the European Community[2] are engaged in a lengthy process scheduled to culminate on December 31, 1992 with integration into a single, unified internal market (see Figure 4.1). This unified market will represent one of the largest trading blocks in the world, with 320 million consumers and a combined gross domestic product of $4.6 trillion. Although the emergence of this integrated market holds great promise for American producers, it also portends significant structural changes for the U.S. which in the short run may threaten to weaken the position of domestic producers.

The state of Tennessee has important linkages with many of the countries which are members of the EC. For example, in 1988 $728 million in export goods were shipped from Tennessee, destined for the EC. Western Europe is also the source of a considerable portion of foreign direct investment in Tennessee. In 1987, four EC countries--France, the Netherlands, the United Kingdom and West Germany--directly accounted for 48 percent of foreign direct investment affiliated employment in the state (or over 38,000 workers). Many questions arise as to how these broad relationships, as well as more specific relationships, might change during and after European integration. Will Tennessee be able to export more to Western Europe, or will European (or other international) producers accommodate any increased demand for goods and services

*The author is grateful to Carlos Martins-Filho for assistance in researching this article.

1. For an expanded discussion of the general implications of the international sector on the state economy, see *An Economic Report to the Governor of the State of Tennessee*, Center for Business and Economic Research, January 1989.

2. The 12 member states are Belgium, Denmark, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, the United Kingdom, and West Germany.

FIGURE 4.1
European Economic Community

resulting from integration? Will integration significantly improve the efficiency and reduce the costs of EC production, leading to increased exports to the U.S. that might compete with domestically produced goods? Will EC investors choose to invest in Western Europe rather than in Tennessee? Will a "Fortress Europe" develop, one that is hostile towards trade with nonmembers of the Community? While there are no clear answers to these and other more specific questions, the issues must be considered so

as to allow the business community and the public sector to position themselves in anticipation of an integrated Europe.

The intent of this chapter is to explore "EC 92" and its implications in greater detail. The chapter begins by examining the historical evolution of the EC, important EC decision-making institutions, and the primary barriers to integration that are to be dismantled. The focus then turns to the potential implications of EC 92 for the state of Tennessee, in terms of foreign direct investment and international trade in goods. The chapter concludes by considering ways in which the state might position itself in anticipation of EC 92.

Evolution of The European Community

Early Initiatives

Movement towards a single, integrated European market began with the Treaty of Rome signed in 1957 by six countries (see Figure 4.2), formally creating the European Community. The initial objectives of the Treaty remain a useful description of the current goals of the European Community project: "eliminate the barriers that divide Europe" through the establishment of a "common market," so as to facilitate trade and growth, both economically and politically.

Elimination of the formal barriers that divide Europe is a formidable task, and it is surprising that a consensus could be reached by the parties involved in this initial effort. The primary and more visible barriers to free intra-European trade that were to be eliminated first were tariffs and quotas. A tariff is a tax, generally expressed as a percentage of the product price (as is the case with a sales tax), which is imposed on imported products. Quotas are limitations on the quantity of a good that can be imported into a country. The intent of these two instruments of trade control is to reduce competition from abroad and encourage domestic production and employment. Tariffs also serve as a revenue source. However, consumers typically must pay higher prices, and the economy may suffer from a misallocation of resources. Because of the adverse effects of tariffs and quotas (including their presence as a visible sign of non-integration), the first policy step was the elimination of these barriers to trade among the member states. This vital first task was completed 18 months ahead of the 12-year deadline, and by mid-1968 all customs duties (i.e., taxes) were abolished for trade among EC countries and a common external tariff was established on all imports from non-EC nations.

FIGURE 4.2

A Brief History of The European Community

1957	Treaty of Rome is signed by France, West Germany, Italy, Belgium, the Netherlands and Luxembourg, formally establishing the European Community.
1968	All custom duties applied to intra-EC trade are eliminated and a common external tariff is imposed on imports into the EC from all outside countries.
1972	Denmark, Ireland and the United Kingdom join the EC.
1979	The European Monetary System (EMS) is created; Greece joins the EC.
1985	The EC Commission completes the *White Paper*, "Completing the Internal Market;" Spain and Portugal enter the EC.
1987	The Single European Act becomes effective in July.
1989	Austria formally applies for membership into the EC.

In addition to a consistent and unified approach to taxes on intra-EC trade, a common framework for indirect taxation (e.g., the taxation of sales and exports) was to be created. Also, through EC legislation, efforts were made to establish uniform standards, because different product standards by individual member states create a barrier to intra-European trade.

The first decade of existence of the EC could be characterized as an overall success. Nevertheless, obstacles to unification remained, and pressures for unification mounted. The decision-making mechanism by which member nations reached agreement delayed the process of unification because it required unanimous consent for the approval of specific legislation. In addition, the economic crisis of the 1970s exacerbated the differences in macroeconomic policies pursued by the member states. The inclusion of four new member states (Denmark, Ireland, the United Kingdom and Greece) also brought new financial and administrative burdens that continued to slow the pace towards the completion of the internal

market. Moreover, in the early 1980s, there was a loss of competitiveness of European products in international markets that triggered a general concern regarding the future of Europe as an economic power. EC unity became a major economic as well as political issue. Integration became a step that had to be undertaken, otherwise Europe would "drop back into mediocrity" (Commission of the European Communities 1985, pp. 55).

Recent Initiatives

In June of 1985 the European Commission, which is the executive arm of the Community, issued a document commonly referred to as the *White Paper* (formally entitled "Completing the Internal Market"). The 1985 *White Paper* raised the stakes associated with unification by noting that there were "immense problems" to be confronted if unification did not take place. These problems, resulting from formal and informal trade barriers, represented a cost of up to 2 percent of the gross domestic product of the 12 member states, or $92 billion. Awareness of the serious waste and damage to the European economy associated with non-integration induced the European Council, the EC's legislative body, to endorse the plan for a unified market, free of any kind of barriers, by December 31, 1992.[3]

The *White Paper*, which is objective and policy-oriented, formalizes the reform measures needed to meet the 1992 deadline. While not addressing all of the hindrances to be surmounted to complete unification, the *White Paper* divides the primary barriers to unification into three groups: (1) physical barriers; (2) fiscal barriers; and (3) technical barriers. The *White Paper* outlines 285 measures (i.e., directives) which, if successfully adopted, would promote the elimination of border controls (i.e., regulation and inspections); the liberalization of movements and activities of financial resources and services (e.g., the activities of finance and insurance companies); the harmonization of regulation standards; and the opening of public procurement markets (i.e., the government bidding process).

The Single European Act (SEA), signed at the end of 1985 and enforced in mid-1987, was an important additional step towards unification. In an attempt to speed up the adoption of directives vital to the completion of the internal market, the SEA modified the voting process, which had previously required unanimous consent, changing it to the weight voting system (a system of qualified majority). This system was used for all issues related to the process of unification except for those involving taxation, professional qualifications, and employees rights, for which unanimous approval still remained necessary. The weights assigned to

3. Much of the renewed interest in integration came about as a result of the work of Paolo Cechinni, who conducted a detailed study of the effects of non-integration. See Cechinni, 1988.

each country are a function of their size. For example, France, Italy, Germany and the U.K. receive the maximum number of votes, whereas Portugal, Spain, Greece and other smaller countries have a smaller number of votes.

The SEA and the *White Paper* both formalized the notion of "mutual recognition" (although this specific term was not included in the language of either document), in lieu of uniform standards across all countries, or independent standards for all countries in the EC. In practice, this implies that a product (legally) marketed in one member state must be allowed access to markets in all member states. This important precedent precludes the need for specific, community-wide standards for every product and service.

The Decision-Making Process

The burden of the design, implementation, and enforcement of EC policies falls on four institutional bodies: the Council of Ministers, the European Commission, the European Parliament and the European Court of Justice. The activities of these organizations are summarized in Figure 4.3.

Formal EC policy (legislation) is specified in the context of various directives and regulations. These policies have the effect of law, and supersede the laws of the individual member states. The directives are drafted initially by the Commission, and subsequently considered by the Parliament. The Council utilizes Parliament's opinion and any revisions made by the Commission to arrive at a "common position." The measure incorporating the common position is then resubmitted to Parliament. If Parliament accepts the measure, it must be formally adopted by the Council. If Parliament rejects the measure, it can be adopted by the Council only through unanimous voting.

Dismantling the Barriers

Present efforts toward unification focus largely on various barriers related to the flow or cost of resources and products. Regardless of how successful these efforts are, it must be emphasized that informal barriers to unification will remain. Some of these differences, such as cultural differences, are sometimes clearly visible; for example, there are nine primary languages in use within the EC. Unfortunately, the strongest threat to market integration is the historical diversity of the various European countries (e.g., nationalism), a factor hardly surmountable by EC legislation.

FIGURE 4.3

Primary Decision-making Institutions
of the European Community

The Council of Ministers

The Council, the primary decision-making (legislative) body of the EC, is comprised of cabinet-level representatives from all member nations. The Council is charged with the task of making financial and administrative decisions, and formally deals with outside countries. The decision-making rule used by the Council (e.g., unanimity or qualified majority) depends upon the nature of the issue.

The Commission

As the executive arm of the EC, the Commission introduces and enforces policy. The Commission consists of 17 commissioners, with at least one, and at most two, from any member country.

The European Parliament

The Parliament is an "advising and supervisory" body with 518 members elected directly by EC citizens to five-year terms. The Parliament's actual role was severely limited prior to the Single European Act. Presently, it has the power to dismiss the commissioners of the EC Commission, reject applications for membership into the EC, and reject international agreements negotiated with non-EC countries.

The European Court of Justice

The Court interprets the Treaty of Rome, ensures compliance, resolves disputes involving other community institutions, and may arbitrate internal disputes over EC laws. Thirteen appointed judges sit on the Court, serving six-year terms.

Source: U.S. International Trade Commission, 1989.

In the following section, the focus is on the primary economic obstacles to market integration. The discussion begins by focusing on specific obstacles that must be dismantled by 1992 and then notes obstacles that will likely remain after 1992.

Specific Barriers to be Dismantled By 1992

A specific set of economic barriers was examined extensively in the *White Paper* and included in the 1992 timetable. Significant progress has been made in removing these barriers, although a complete dismantling by 1992 is doubtful. Each type of barrier is discussed in turn below.

Border controls. A most evident barrier to market integration is the presence of border restrictions that impede the free movement of people and goods, such as border inspections and the stamping of passports. Although intra-EC tariffs were abolished in 1968, border controls are still necessary due to differences in various other laws and regulations among the member states. More specifically, border controls are due to the following factors:

- Differences in value added and excise tax rates and coverage
- Variations in agricultural support programs
- Veterinary controls due to divergent national health standards
- Transport controls (e.g., weight limits and licensing)
- Control of bilateral trade with non-EC countries, in recognition of trade quotas against nonmember states

Border controls raise significantly the production and transportation costs associated with inter- and intra-EC trade. Illustrative of the costliness of border controls is the example of truck delays arising from customs requirements. According to a 1984 study, trucks suffered an average delay of 80 minutes on EC borders at a per-truck cost that varied from $38 to $48. This represents a total cost of $10 billion a year. In addition, a 1988 study estimates that European firms pay as much as $8 billion in administrative costs and other delays occasioned by customs procedures.[4] As a final example, there is currently no right of transit with respect to electrical and gas systems across borders of the EC member states. However, some countries experience energy shortages, whereas others have energy surpluses. It has been estimated that by allowing inter-country energy transfers, the EC could save $1.2 billion by 1992 (*Journal of Commerce*, July 13, 1989). Dismantling border controls would not only serve to reduce costs, but would also have a strong psychological effect on market integration, since border controls are clear and obvious evidence of a non-integrated market.

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4. Cecchini (1988), p. 8-15.

Labor force movement. Citizens of the EC have the right to work or do business in any member state without facing formal restrictions. For example, a physician who graduated from a Portuguese university can practice in London, Berlin or Copenhagen. Accountants and lawyers may have to take short courses to update their knowledge of country-specific practices, but they will be able to conduct business throughout the EC. Blue-collar workers can move freely, with no formal restrictions of any type.

Although the mobility of the labor force is uninhibited in terms of formal regulations, there remain problems and barriers. Some professional groups, interested in keeping outside competition to a minimum, may seek to limit recognition of outside professionals. The reason is that some of these groups derive enormous economic advantages from existing laws and regulations in their countries. Another major barrier to the free movement of labor reflects concerns with the quality of education received by the immigrant professional. This is particularly the case when a professional from a southern state such as Greece or Portugal moves to a northern country such as Germany or Denmark. There also may be racial or ethnic barriers which interfere with the movement of people. Such socio-cultural barriers can severely limit the effective mobility of labor, and may prohibit the EC from realizing its potential.

Different tax rates may induce consumers to seek out low-tax countries, just as consumers in Tennessee may seek out low-tax counties or states, or purchase goods through mail-order sales companies, in order to reduce their sales tax liabilities.

Tax structure. The most important indirect tax in the EC is the value added tax (VAT). Differences in VAT rates, and differences in the tax base to which the rates apply, represent a major obstacle to unification. Harmonization of the VAT is important in eliminating (or reducing) the distortions associated with varying VAT structures. For example, different tax rates may induce consumers to seek out low-tax countries, just as consumers in Tennessee may seek out low-tax counties or states, or purchase goods through mail-order sales companies, in order to reduce their sales tax liabilities.

The structure of the VAT varies dramatically across the member states. This structure may be summarized as follows:

(1) Low Rate--Imposed on necessities such as food and children's clothes, and varies from 0 percent in the U.K. to 10 percent in Ireland

(2) Basic Rate--Varies from 12 percent in Spain and Luxembourg to 25 percent in Ireland

(3) High Rate--Imposed on luxury items such as cars and stereos, and varies from 25 percent in Belgium to 38 percent in Italy

The EC proposes to retain these three VAT categories, but narrow the bands within which member state's tax rates may lie. For example, within the low-rate category, the EC has proposed a minimum rate of 4 percent and a maximum rate of 9 percent. This (limited) harmonization of the VAT structure will likely reduce consumption and trade distortions. However, harmonization faces serious obstacles within member nations. For example, there is opposition in Britain to the new rates to be applied within the low-rate category, since the British presently do not tax food, but with unification would be forced to tax food at a minimum rate of 4 percent. On the other hand, other countries--such as Denmark, which has relatively high rates of taxation--may be forced to reduce rates. This may generate serious domestic political repercussions and limit state involvement in the EC. Nonetheless, progress toward harmonization continues.

Divergences in technical standards. Variations in technical standards represent one of the most serious hindrances to free trade in Europe. European businessmen rank differences in regulations and standards as one of the most acute problems associated with their European operations. The problem is that European firms tend to produce for national markets (i.e., they narrow their horizons by producing for small markets), and thus fail to benefit from the economies of large-scale production. For example, the Dutch multinational Phillips Corporation must produce seven different types of television sets to meet varying technical standards within Europe. Another example, reported in the *Journal of Commerce* (July 24, 1989), indicates that there are five major U.S. producers of auto batteries, four major Japanese producers, and 58 European producers. This problem, which has enormous effects on costs, production, and technology, arises because intra-European trade, as it relates to technical standards, is not regulated by the Community's laws and standards. The result is, for example, that some products which are marketed in France may not be lawfully or practically marketed in Germany. These disparities occur, in part, because national legislators have different concepts of what is harmful for their citizens in the fields of health, safety, and environmental protection. Regardless of the reason, the immediate effect is that technical standards vary from country to country, creating large costs for businessmen, consumers, and government.

The problem with technical standards is even more critical in the context of investment goods. A 1987 survey (see Cechinni, 1988) concluded that investment goods suffer more than consumer products from technical trade barriers. The distortions created by this kind of barrier are pervasive, affecting the production process, the firm's cost structure, the accumulation of capital, and investment decisions concerning research and development, etc.

The EC has developed some strategies to combat the lack of uniformity that influences intra-European trade. The main action is called selective harmonization. The goal is to substitute national regulations with a broad body of EC rules and standards. For example, the EC may determine pollution-emission levels (by firms or automobiles), but may allow individuals or firms discretion in how to reduce emissions. Another important action, noted above, is what has been called *mutual recognition*. This is a very simple principle, but a powerful one with respect to trade. Mutual recognition would allow goods produced and marketed in one of the member states to be marketed in all others with no restrictions.

Two obstacles to unification are (1) the absence of a common currency and coordinated monetary policy, and (2) the lack of coordination of fiscal policy.

Post-1992 Obstacles to Integration

Although most of the obstacles to unification were addressed in the *White Paper*, some important issues were set aside. Two of the more important issues not addressed were (1) the absence of a common currency and coordinated monetary policy; and (2) the lack of coordination of fiscal policy (including different structures of direct, or personal taxation). Coordination, particularly as it relates to monetary and fiscal policy, is an extremely sensitive issue, because member states fear the loss of national sovereignty. Some countries--for example, the United Kingdom--also fear the loss of national and international prestige that might be associated with the assimilation of the United Kingdom and the British pound into the broader EC and the European Monetary System (EMS).

At present, the EMS--created in 1979--does possess central powers, although they are limited. For example, while exchange rates for member nations are allowed to fluctuate, there are ties (albeit loose ones) among currencies, and the EMS allows for the collective sale or purchase of certain currencies to control exchange rate-fluctuations. Another important aspect of the EMS is that it provides a framework wherein finance ministers of member states can meet and discuss issues of common interest. However, involvement and agreement varies across member states as the achievement of independent national goals and objectives is sought. Because of perceived problems associated with tight coordination of monetary policy, it is doubtful that the vision of a centralized monetary system with a common EC currency will be realized by 1992 or anytime soon thereafter. The problems are exemplified by Britain's reluctance to join the EMS, largely because the EMS might lead to much greater centralized control of monetary policy and the containment of fiscal policies (so as not to be in conflict with monetary policy).

Coordination of fiscal policy is complicated by different structures of taxation and different needs facing the various member states. Some harmonization (as opposed to unification) of the tax structure has been agreed upon, as it relates to the VAT and certain other indirect taxes. However, no agreement has been reached in terms of the taxation of individuals and corporations. The different needs of the individual EC nations are illustrated by different rates of unemployment, different levels of development and rates of growth, different distributional concerns, etc. For example, unemployment rates in Spain may be as much as 15 times higher than unemployment rates in Luxembourg, and more than twice as high as those in West Germany and the U.K.; per capita income exhibits considerable variation, with Denmark's per capita income nearly five times higher than Portugal's. Fiscal policy variations will likely remain well after 1992, reflecting variations in the need, willingness and ability of member states to provide public services.

Summary

The transformation underway in Western Europe, in many respects unparalleled in recent history, holds great promise for the future of Europe. However, unification and integration must be viewed as a process, not as a magical event that will occur in 1992. The *White Paper* and the Single European Act are comprehensive documents that represent some of the last institutional steps to internal unification. However, these documents are the outgrowth of a process that has its formal roots in 1957. In addition, these documents do not consider all issues related to integration, nor are answers provided to all questions. Cultural, political and historical differences across member states will remain as informal barriers to integration. Serious issues remain to be resolved, such as the harmonization of fiscal and monetary policy among member states. A resolution on these issues by 1992 is extremely unlikely. Moreover, while important issues relating to intra-EC relationships have been resolved, the rules governing relationships with outside countries remain largely unspecified.

Implications of EC 92 for Tennessee

Linkages between the Tennessee state economy and the EC will necessarily be altered in the 1990s in response to integration. The fundamental questions relate to how these relationships will change, and what the implications of such changes will be. Unfortunately, even at this late date, little is known about how existing linkages will be altered. In part this is due to the absence of detailed information on existing patterns of trade between Tennessee and the EC. However, even if trade patterns

were known, uncertainty would remain for two reasons. First, it is not clear what advantages will be afforded to European producers as a result of completion of the internal market program. Second, there has been a conspicuous absence of EC action on specific legislation pertaining to trade with non-EC countries. Up until this point in the evolution of the EC, the focus has been on establishing an "internal market," as indicated explicitly in the formal title of the 1985 *White Paper*, "Completing the Internal Market." It may be several years before specific legislation is drafted that addresses external trade and external markets.

For the U.S. and Tennessee the primary economic effects arising from European integration can be placed in two broad categories: (1) impacts attributable to changes in financial capital flows and foreign direct investment; and (2) impacts arising from changes in the flow of import and export goods and services.

For the U.S. and Tennessee the primary economic effects arising from European integration can be placed in two broad categories: (1) impacts attributable to changes in financial capital flows and foreign direct investment; and (2) impacts arising from changes in the flow of import and export goods and services.[5] Because of the absence of specific information, much of the discussion below, which focuses largely on the potential implications of these changes for Tennessee, is speculative and is intended to be thought-provoking rather than conclusive. It should be noted at the outset of this discussion that there is considerable debate as to whether integration itself will help or harm the U.S. economy. The chapter then concludes by noting ways in which the state and business community might position themselves to take advantage of or reduce any adverse implications associated with integration of the EC.

Foreign Direct Investment

State and local governments have looked to foreign direct investment (FDI) as an important source of investment and employment generation. Foreign direct investment (which is defined for statistical purposes as investments where a foreign investor controls at least 10 percent of the assets) has increased significantly in Tennessee in the last decade. Between 1979 (the peak of the previous business cycle) and 1987, the share of state employment in all FDI-affiliated enterprises increased from nearly 2 percent to 3.7 percent. The individual member states of the EC have been an important source of FDI for Tennessee as well as for the U.S., with EC-sourced investments accounting for over 40,000 state jobs and nearly 1.6 million U.S. jobs in 1987.

Integration of the EC may have important direct and indirect effects on the flow of FDI and may influence the state's ability to attract and retain investments from abroad. In the two sections which follow, the implications of EC 92 for FDI in Tennessee are explored by first discussing exist-

5. The economic implications of EC 92 for the U.S. are explored in greater detail in the U.S. International Trade Commission's 1989 report.

ing in-state direct investment patterns by the EC, and by next speculating on ways in which FDI flows might change in response to integration.

Existing patterns of EC-sourced FDI. Detailed data on FDI are quite limited, particularly at the state level. This makes it extremely difficult to identify the existing structure of FDI for the state of Tennessee. First, it is often impossible to identify aggregate investments (across sectors) made by certain countries in specific states, particularly those investments which have as their origin the smaller EC countries, such as Greece and Portugal. For example, no data are available on investments in Tennessee by firms headquartered in Greece and Portugal. Second, no state-level information is available on the extent of investment in specific sectors (such as retail trade and manufacturing) by individual countries.[6] As a result, it is impossible to determine the exact sectors in which EC-sourced investments have been made.

Data are available for the state that pertain to four of the leading EC nations--France, the Netherlands, the U.K. and West Germany. In 1987, the gross book value of FDI in Tennessee attributable to these four countries represented 71 percent of all European-sourced investment in the state and 30 percent of the value of FDI in Tennessee from all international sources. In terms of employment, France, the Netherlands, the U.K. and West Germany accounted for 76 percent of all employment attributable to European FDI in 1987. This figure represents 47 percent of FDI-affiliated employment from all sources and 1.7 percent of total state employment in 1987. This can be contrasted with employment attributable to Canadian and Japanese FDI, which comprised 20 percent and 9.8 percent, respectively, of all FDI-affiliated employment for the same year.

The only industry breakdown of EC-sourced FDI pertains to the entire U.S. As of 1987, 52 percent of all EC-sourced FDI-affiliated employment in the U.S. was in the manufacturing sector, which is slightly higher than the manufacturing orientation of FDI from all outside sources (48 percent). Retail trade and wholesale trade accounted for 19 percent and 9 percent of such employment. No specific information is available that would indicate whether this employment structure applies to Tennessee. However, given the state's strong manufacturing orientation, it is likely that EC-sourced FDI in Tennessee is even more heavily oriented to the manufacturing sector.

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6. Additional data are released annually by the U.S. Department of Commerce, International Trade Administration (e.g., *Foreign Direct Investment in the U.S., 1986 Transactions*), which pertain to completed transactions undertaken by nonresident investors. These data include the state of investment, the U.S. firm which was the target of investment, the value of the investment, four-digit industry, and country of origin. Unfortunately, many of these details are not provided in aggregate versions of the data which are released by the Department of Commerce.

EC 92 and FDI. Many factors influence the flow of FDI, including the rates of return on investments in different countries, prices, exchange rates, and barriers to trade (which induce investment to circumvent such barriers, as with Japanese auto production in the U.S.). Integration of the EC may influence future flows of FDI by influencing these and a range of other factors.

As an example, analysts within the EC have indicated that integration will lead to reduced production costs and expansions in the internal demand for goods and services, which might in turn be expected to raise the returns on investments made within the EC. This raises many questions regarding the general flow of FDI, and the more specific flow of FDI to the U.S. and Tennessee. Will investors within the EC exploit internal investment opportunities, and invest less in Tennessee? Would any reduced FDI in Tennessee on the part of the EC be met by increased investment from non-EC investors? Will U.S. and international investors seek to exploit EC-based opportunities (perhaps reducing domestic U.S. investment), or might this exploitation be precluded by potential EC restrictions on outside investments? Alternatively, will EC growth be so robust that it leads to rapid growth in the world economy and thence to increased investment in Tennessee?

Unfortunately, there is very little information upon which answers to these and other questions could be based. However, as noted above, FDI-affiliated employment--both in total, and that reflecting the EC--accounts for only a relatively small portion of overall state employment. Hence, relatively large changes in FDI would be necessary to produce a pronounced effect on the state economy. For example, if the flow of FDI from Europe were to increase or decrease by 10 percent between 1987 and 1995--relative to a continuation of FDI growth consistent with historical growth between 1979 and 1987--the number of state jobs might expand or contract, in total over the eight years, by as much as 3,000 by 1995. Yet such a change would represent only 0.1 percent of estimated state employment in 1995. These rough estimates, which are meant to be purely suggestive, indicate that even dramatic changes in FDI might not have dramatic effects on the overall state economy.

While any aggregate effects of changes in FDI flows may be relatively small, it is important to recognize that the dislocations and adjustments for specific communities, firms, and individuals may be significant. Moreover, it is likely, although by no means certain, that if firms do contract or exit the economy, these effects will be concentrated within Tennessee's manufacturing sector, a sector that has already been subjected to significant structural change.

Export and Import Trade[7]

The worst-case trade scenario arising from integration of Western Europe is the evolution of the EC into a Fortress Europe, a monolith that imposes barriers against non-EC produced goods and services and provides extensive support for EC-based production. Such protectionist sentiment would have serious negative effects on international trade in general, and would likely disrupt the state economy as well. Fortunately, there is no formal basis for this extremely pessimistic view of integration, at least in terms of actions and initiatives taken by the EC to date. In fact, available information indicates that the EC will abide by the General Agreement on Tariffs and Trade (GATT) framework.

Domestic producers may face increased competition from relatively lower-priced EC-produced products. This direct effect will dampen the demand for Tennessee-produced goods intended for export.

The Tennessee state economy has increasingly been integrated into the international economy, with Tennessee products now competing, directly or indirectly, with goods produced throughout the world. As a result, regardless of how the EC evolves, there will be changes in international import and export trade that influence the performance of the state economy. In some cases, integration may open new doors and offer new opportunities. In other cases, Tennessee producers may find that trade opportunities have been restricted or eliminated.

In the discussion which follows, the implications of changes in international trade brought about by completion of the internal market are explored. As with the discussion of FDI above, many of the comments which follow are speculative due to the absence of specific EC policies regarding international trade and because of uncertainty regarding the effects of internal integration.

Implications for the U.S. Many analysts suggest that the U.S., and hence Tennessee, will likely be disadvantaged--at least in the short run--in response to integration of the EC. The primary source of this new EC advantage derives from efficiency and cost-cutting gains attributable directly to completion of the internal market, which translates into price advantages for European-produced products. In general, it is anticipated that trade within the EC will increase at the expense of trade with the non-EC countries. The efficiency gains and implied price advantages also may allow for the expansion of EC market shares at the expense of domestic producers.

For the six-year period following 1992, the WEFA Group has forecast the macroeconomic implications of EC 92 at the national level under two

7. For a discussion of the potential implications for financial services trade, see Key (1989).

scenarios. Both scenarios rely on EC estimates of efficiency gains for EC producers associated with completion of the 1992 program, which may translate into pricing advantages vis-a-vis non-EC producers. The scenarios differ in that the first, the "full-impact" scenario, assumes that increases in demand resulting from more robust economic growth within the EC are met by increased EC-based production. The second, or "stumble," scenario assumes that increases in EC demand are met by other (i.e., non-EC) international producers. Under the full-impact scenario, growth in the U.S., as measured by growth in gross domestic product, is reduced relative to baseline growth for the 1992-1998 period. In 1998, growth is forecast to be nearly one percentage point below the growth that would take place in the absence of integration. Under the stumble scenario, economic growth over the short run may actually increase for the U.S., relative to baseline growth. However, by 1998, price advantages for EC producers will draw economic activity away from the U.S., reducing our rate of growth.

The WEFA estimates, as well as a number of other studies, rely on EC estimates of efficiency and pricing gains for EC producers. To the extent such estimates are overly optimistic--and many observers argue they are grossly optimistic--the impacts for the U.S. will be overly pessimistic.

Exports and the state economy. Unfortunately, the WEFA forecast is not sufficiently disaggregated to allow identification of specific impacts for Tennessee. To illustrate how integration may influence the state economy, consider the implications for goods produced in Tennessee which are intended for export to the EC or other international markets. Export flows might change in response to integration in three ways. First, domestic producers may face increased competition from relatively lower-priced EC-produced products. This direct effect will dampen the demand for Tennessee-produced goods intended for export. A second negative effect may result as goods produced in other countries and previously destined for the EC are squeezed into international markets. This crowding would serve to depress prices (or rates of price increase), impose additional competition on Tennessee-produced goods, and dampen demand for Tennessee's exports. A third and potentially positive effect may be realized over the longer run as the EC, and world economies expand and are able to absorb more production.

The fact that only limited data are available on the export orientation of the state economy complicates efforts to isolate potential impacts from integration. The *Annual Survey of Manufactures: Origin of Exports of Manufactured Products* (Bureau of the Census) reports that in 1984, 41,700 state manufacturing jobs were directly or indirectly related to the export sector, with 36,000 additional jobs indirectly supported in non-

manufacturing. Unfortunately, more recent data are unavailable, as are data pertaining to countries of destination for Tennessee exports.

An alternative data source is available for 1988 that summarizes export shipments by state of origin to specific countries (including those within the EC), by 2-digit standard industrial classification (SIC). This data source, provided by the Foreign Trade Division of the Bureau of the Census, suffers from three deficiencies that must be taken as caveats in using and interpreting these data. First, state of origin pertains to where products begin their overseas journey, *not* where production takes place. Second, country of destination refers to where goods end their international trip from the U.S., *not* where goods are consumed. And third, 25 percent of all shipment records contain missing information which require imputations from other sources.

These data, with the caveats as noted above, indicate that Tennessee was the origin of travel for nearly $2.5 billion in exports in 1988, a figure which represents approximately 3 percent of gross state product for the same year. The EC was the point of destination for 29.5 percent of Tennessee exports, valued at $728 million. While Tennessee's overall level of exports is less than one-half the U.S. average of $6.2 billion, the share of state exports destined for the EC (29.5 percent) exceeds the average for the U.S. (23 percent). Nearly 25 percent of all manufactured exports from the state flow to the EC, including 27 percent of durable goods exports and 23 percent of nondurable goods exports. Over 30 percent of the state's agricultural exports, valued at $26 million, also flow to the EC. Some of the specific manufacturing sectors with large export shares to the EC include lumber and wood (54.9 percent), leather and leather products (50.6 percent), paper (48.7 percent), tobacco (43.3 percent), miscellaneous durable goods (42.5 percent), and instruments (42.3 percent). Manufacturing sectors with particularly low export shares to the EC include apparel (10.1 percent), primary metals (12.3 percent), rubber and plastics (15.5 percent), and electrical machinery (17.7 percent).

One of the few specific sources of information on how export flows might fare after EC integration is a study conducted by the U.S. International Trade Commission (1989). This study concludes that up to $9.3 billion in U.S. exports could be disadvantaged by various EC directives passed through December 31, 1988--directives which might restrict access to EC markets. The same source notes that 21,900 jobs are associated with each $1 billion in exports. Based on U.S. and Tennessee export flows, as discussed above, and this specific information, it is estimated that Tennessee could potentially lose 2,098 jobs in its export sector. Alternatively,

Tennessee may gain as other existing opportunities and new opportunities are taken advantage of.

Imports and the state economy. Many sectors produce goods within the state that are intended for in-state or other domestic markets, rather than for export. Nonetheless, these sectors may be influenced adversely by EC integration, since domestically-produced goods compete with foreign-produced goods in both U.S. and international markets.

Export flows from the EC and other countries, which translate into imports to the U.S. and Tennessee, may, in the short run, be altered in two ways. First, exports from the EC to the U.S. and Tennessee may increase directly as EC producers exploit scale economies and other efficiency gains. This translates into increased direct import competition and industrial dislocation for Tennessee producers. Second, increased exports from EC countries implies heightened competition in international markets that would depress the prices of the range of goods which serve as substitutes for domestically produced goods. This would be an additional source of undesirable import competition for Tennessee producers, although consumers may benefit from lower prices.

It is clear that EC92 will bring about changes in international investment patterns and trade, changes that may very well negatively influence the state economy.

The state economy may be sensitive to import competition, particularly in nondurable goods manufacturing. Unfortunately, there are no data to provide more specific insights on the import competition implications of EC 92, either at the national or state level.

Summary

It is clear that EC 92 will bring about changes in international investment patterns and trade, changes that may very well negatively influence the state economy. To some extent, state-level impacts might be mitigated by Tennessee's limited direct involvement in export trade with the EC. However, it is essential to recognize that due to the internationalization of the state economy, other sectors of the economy remain sensitive to import competition, and the entire state is increasingly reliant upon FDI. Moreover, serious negative impacts for the U.S. economy may produce ripple effects which impinge upon the state economy, again mitigating any salutory direct effects.

Speculative estimates of negative employment effects attributable to EC 92 cast some doubt on the concern that integration will dramatically affect the Tennessee economy. However, these estimates are likely to be im-

precise, and it is possible that the combined negative impacts arising from changes in FDI flows, exports flows and import flows may lead to more serious macroeconomic effects. It is also conceivable that the EC has overestimated its gains from integration, and hence overestimated the implied losses to other countries. Regardless, even though the macroeconomic implications of EC 92 may not be particularly pronounced--and many observers within the EC and outside the EC don't expect the effects to be particularly large--there will likely remain important structural adjustments that influence the economic vitality of specific regions, communities, industries, and firms. For this reason, increased attention must be focused on EC 92 and the implications for Tennessee.

Conclusion: Positioning in Anticipation of Integration

It is important that the business community and the public sector position themselves in anticipation of an integrated European economy. Completion of the internal market program may provide disproportionate gains for European producers which may in turn disadvantage economic activity in Tennessee. Moreover, while a Fortress Europe is not likely to develop, some protectionist sentiment will likely be present within the EC, and barriers may be imposed against non-EC products and the activities of non-EC nationals. For example, there will likely be restrictions on auto imports (at least) through the mid-1990s; the EC has considered 51 percent domestic-content requirements for television programming and may require that EC citizens have at least a 51 percent equity ownership in all domestic trucking operations; and there is staunch EC opposition to the importation of hormone-treated meat and dairy products from the U.S. Such barriers would exacerbate any adverse implications associated with completion of the internal market. On the other hand, both in the short run and the long run, new marketing opportunities will arise in the EC that could be exploited by U.S.-based producers.

The Europeans are positioning themselves in many ways. At the most general level, the EC 92 program has involved the citizenry of western Europe in dialogue and debate, heightening awareness of the potential positive and negative impacts arising from integration. More specifically, there is evidence of an investment boom and a pronounced increase in merger and acquisition activity in Europe as producers gear up for economic transformation and growth. For example, a number of British ports are being modernized and expanded, in part to meet the anticipated demand following 1992. At Manchester University in England, the Manchester Business School's MBA program is offering marketing research and other forms of technical assistance. Interestingly, this offer of

assistance is being extended, not to EC-based entrepreneurs, but rather to non-EC entrepreneurs seeking to exploit European markets.

Unfortunately, in the U.S. and Tennessee, little is being done in anticipation of integration, even at the most general level of heightening an awareness of the internal market program. To the extent actions have been taken, they are largely the actions of specific individuals and large corporate concerns.

Clearly more can be done in preparing for changing international relations. A number of possible actions that could be taken include:

- An information campaign to heighten public awareness of EC 92 and potential positive and negative impacts.

- In conjunction with neighboring states or local government units and development organizations, or even unilaterally, the state of Tennessee could establish a formal EC trade representative and information network. Many neighboring states already have trade representatives in one or more EC countries, and a consortium could be established linking these resources.

- State and local government, the private sector or a public-private cooperative effort could provide general and specific information on the internal market program through conferences, seminars and newsletters. This may serve to inform business and community leaders of specific opportunities and potential dislocations.

- A financial assistance program for entrepreneurs wishing to do business in the EC (or in other international markets) could be developed. This could take the form of a private sector banking consortium that would provide loans to Tennessee entrepreneurs. A program of this type would serve the additional role of increasing the involvement of Tennessee's financial institutions in the international arena. Alternatively, the state could take a more active role through loan provision or loan guarantees.

- Consideration could be given to programs that deal with negative dislocative effects arising from integration, drawing upon JTPA and other resources. This may raise an equity concern if the same assistance is not extended to dislocations arising from other forms of structural change.

- The implications for Tennessee's agricultural sector must be explored in greater detail. Much of the EC legislation pertaining to agricultural trade will be developed more formally in the years to

come. Changes to Tennessee's agricultural sector will be complicated by international trends towards reduced government involvement in agriculture production, which will further increase competition in agriculture markets.

Tennessee producers seeking to establish a foothold in European markets must act now. In most cases, it is too late to make inroads via grassroots investments. Instead, joint efforts between domestic producers and EC producers may be most viable. This would allow domestic producers to draw upon the expertise of their new European partners. Moreover, firms under joint ownership may receive more favorable treatment within the EC than firms held solely by non-Europeans.

Whether or not action is taken on these, or other proposals, it is imperative that we pay close attention to the evolution of the European Community so as to better understand the implications for ourselves and the state. ■

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APPENDIX 1: FORECAST DATA

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 1: SELECTED U.S. AND TENNESSEE ECONOMIC INDICATORS
SEASONALLY ADJUSTED

	HISTORY				FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
US GNP (BIL 82 $) SAAR	4106.8	4134.0	4157.7	4173.7	4187.4	4212.4	4237.5	4264.8	4285.7	4316.5	4343.9	4024.4	4143.1	4225.5
% CHG PREV QTR SAAR	3.73	2.68	2.31	1.55	1.31	2.41	2.40	2.61	1.97	2.90	2.56	4.43	2.95	1.99
% CHG SAME QTR LAST YR	3.32	3.07	2.84	2.56	1.96	1.90	1.92	2.18	2.35	2.47	2.51	4.43	2.95	1.99
US PERS CONS DEFL (1982=100)	128.0	129.8	131.1	132.6	134.1	135.6	136.8	138.3	140.1	141.9	143.7	124.5	130.4	136.2
% CHG PREV QTR SAAR	4.83	5.74	4.05	4.65	4.61	4.41	3.81	4.45	5.33	5.04	5.18	3.94	4.72	4.47
% CHG SAME QTR LAST YR	4.49	4.76	4.79	4.82	4.76	4.43	4.37	4.32	4.50	4.66	5.00	3.94	4.72	4.47
TN PERSONAL INCOME (MIL $) SAAR	71360	71692	72445	73446	74612	75862	77010	78254	80026	81589	83233	67243	72236	76435
% CHG PREV QTR SAAR	9.77	1.88	4.26	5.64	6.50	6.87	6.19	6.62	9.37	8.05	8.31	7.55	7.43	5.81
% CHG SAME QTR LAST YR	9.88	7.91	6.74	5.35	4.56	5.82	6.30	6.55	7.26	7.55	8.08	7.55	7.43	5.81
TN PERSONAL INCOME (MIL82$) SAAR	55750	55233	55261	55392	55641	55966	56285	56575	57109	57513	57937	54001	55409	56117
% CHG PREV QTR SAAR	4.71	-3.66	0.20	0.95	1.81	2.36	2.30	2.08	3.83	2.86	2.98	3.47	2.61	1.28
% CHG SAME QTR LAST YR	5.15	3.01	1.86	0.51	-0.20	1.33	1.85	2.14	2.64	2.77	2.93	3.47	2.61	1.28
US PERSONAL INCOME (BIL82$) SAAR	3373.3	3389.5	3409.7	3425.2	3438.9	3461.5	3481.0	3501.5	3522.9	3541.5	3556.4	3264.3	3399.4	3470.7
% CHG PREV QTR SAAR	8.07	1.94	2.40	1.83	1.62	2.65	2.27	2.38	2.47	2.12	1.70	3.51	4.14	2.10
% CHG SAME QTR LAST YR	4.65	4.30	4.10	3.53	1.95	2.12	2.09	2.23	2.44	2.31	2.17	3.51	4.14	2.10
TN NONAGRIC JOBS (THOUS)	2085.0	2077.6	2075.9	2082.5	2088.5	2095.3	2101.9	2109.3	2121.1	2133.5	2146.7	2065.9	2080.2	2098.8
% CHG PREV QTR SAAR	2.19	-1.41	-0.31	1.27	1.17	1.31	1.25	1.43	2.25	2.36	2.50	2.70	0.69	0.89
% CHG SAME QTR LAST YR	1.22	0.53	0.59	0.42	0.17	0.86	1.25	1.29	1.56	1.82	2.13	2.70	0.69	0.89
US NONAGRIC JOBS (MIL)	107.7	108.3	108.9	109.3	109.6	110.0	110.4	110.8	111.2	111.6	112.1	105.6	108.5	110.2
% CHG PREV QTR SAAR	3.34	2.41	2.06	1.46	1.18	1.39	1.46	1.50	1.46	1.62	1.63	3.31	2.80	1.51
% CHG SAME QTR LAST YR	3.19	2.98	2.74	2.32	1.78	1.52	1.37	1.38	1.45	1.51	1.55	3.31	2.80	1.51
TN UNEMPLOYMENT RATE (%)	5.8	5.3	4.8	5.3	5.6	5.7	5.7	5.6	5.5	5.5	5.4	5.8	5.3	5.6
US UNEMPLOYMENT RATE (%)	5.2	5.3	5.2	5.3	5.5	5.5	5.4	5.4	5.4	5.3	5.3	5.5	5.2	5.4
BANK PRIME INTEREST RATE (%)	11.0	11.4	10.7	10.5	10.3	10.0	10.0	10.0	10.0	10.3	10.2	9.3	10.9	10.1
TN MFG JOBS (THOUS)	511.6	510.8	512.2	513.3	515.1	515.4	515.9	516.0	517.4	518.8	521.1	508.2	512.0	515.6
% CHG PREV QTR SAAR	1.87	-0.62	1.07	0.88	1.42	0.26	0.38	0.09	1.02	1.16	1.75	2.16	0.73	0.72
% CHG SAME QTR LAST YR	0.64	0.59	0.91	0.79	0.68	0.91	0.74	0.54	0.44	0.66	1.00	2.16	0.73	0.72
TN MFG AVG WEEKLY HOURS	41.2	41.1	40.9	40.8	40.8	40.7	40.7	40.7	40.7	40.7	40.7	41.6	41.0	40.7
% CHG PREV QTR SAAR	-1.04	-0.96	-1.33	-0.84	-0.72	-0.32	-0.38	-0.13	-0.10	0.26	0.24	0.05	-1.44	-0.68
% CHG SAME QTR LAST YR	-2.09	-1.43	-1.19	-1.04	-0.96	-0.80	-0.57	-0.39	-0.23	-0.09	0.07	0.05	-1.44	-0.68
TN TAXABLE SALES (MIL $)	9944	9937	10111	10223	10356	10506	10643	10809	11021	11202	11399	38508	40216	42314
% CHG PREV QTR SAAR	8.4	-0.3	7.2	4.5	5.3	5.9	5.3	6.4	8.1	6.7	7.2	6.0	4.4	5.2
% CHG SAME QTR LAST YR	4.8	2.9	5.2	4.9	4.1	5.7	5.3	5.7	6.4	6.6	7.1	6.0	4.4	5.2
TN TAXABLE SALES (MIL 82$)	7769	7656	7713	7710	7723	7751	7779	7814	7865	7896	7934	30932	30848	31067
% CHG PREV QTR SAAR	3.4	-5.7	3.0	-0.1	0.6	1.5	1.5	1.8	2.6	1.6	1.9	2.0	-0.3	0.7
% CHG SAME QTR LAST YR	0.2	-1.8	0.4	0.1	-0.6	1.2	0.9	1.4	1.8	1.9	2.0	2.0	-0.3	0.7

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 2: TENNESSEE PERSONAL INCOME
SEASONALLY ADJUSTED ANNUAL RATES
(MILLIONS OF DOLLARS)

	HISTORY	FORECAST - DATA										ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL PERSONAL INCOME (CUR).....	71360	71692	72445	73446	74612	75862	77010	78254	80026	81589	83233	67243	72236	76435
% CHG PREV QTR SAAR.....	9.77	1.88	4.26	5.64	6.50	6.87	6.19	6.62	9.37	8.05	8.31	7.55	7.43	5.81
% CHG SAME QTR LAST YR.....	9.88	7.91	6.74	5.35	4.56	5.82	6.30	6.55	7.26	7.55	8.08	7.55	7.43	5.81
WAGES AND SALARIES.....	43837	43829	44236	44837	45494	46199	46909	47656	48711	49752	50840	41515	44185	46564
% CHG PREV QTR SAAR.....	5.66	-0.08	3.77	5.54	5.99	6.34	6.29	6.53	9.15	8.83	9.04	7.82	6.43	5.39
% CHG SAME QTR LAST YR.....	9.98	6.97	5.36	3.70	3.78	5.41	6.04	6.29	7.07	7.69	8.38	7.82	6.43	5.39
OTHER LABOR INCOME.....	3866	3876	3936	3995	4055	4115	4178	4241	4309	4380	4455	3729	3918	4147
% CHG PREV QTR SAAR.....	8.15	1.05	6.31	6.12	6.21	6.06	6.25	6.11	6.64	6.67	7.10	4.51	5.07	5.85
% CHG SAME QTR LAST YR.....	5.77	4.51	4.65	5.37	4.90	6.17	6.16	6.16	6.27	6.42	6.63	4.51	5.07	5.85
PROPRIETORS INCOME.....	6833	6855	6903	7034	7120	7232	7339	7477	7573	7683	7780	6285	6906	7292
% CHG PREV QTR SAAR.....	24.63	1.29	2.82	7.80	5.00	6.45	6.06	7.73	5.22	5.95	5.14	6.97	9.89	5.59
% CHG SAME QTR LAST YR.....	12.07	9.36	9.44	8.76	4.20	5.50	6.32	6.30	6.36	6.24	6.00	6.97	9.89	5.59
RENT INTEREST DIVIDENDS.....	10164	10409	10591	10776	10922	11153	11350	11546	11818	12059	12313	9309	10485	11243
% CHG PREV QTR SAAR.....	19.02	9.98	7.20	7.18	5.53	8.71	7.28	7.06	9.79	8.40	8.69	9.47	12.64	7.23
% CHG SAME QTR LAST YR.....	13.24	14.15	12.55	10.74	7.46	7.15	7.17	7.14	8.21	8.13	8.48	9.47	12.64	7.23
TRANSFER PAYMENTS.....	11054	11190	11292	11366	11759	12002	12155	12325	12767	12977	13210	10478	11225	12060
% CHG PREV QTR SAAR.....	14.98	5.02	3.68	2.65	14.57	8.54	5.19	5.72	15.11	6.76	7.38	7.77	7.14	7.44
% CHG SAME QTR LAST YR.....	7.39	7.46	7.25	6.47	6.38	7.26	7.64	8.44	8.57	8.12	8.68	7.77	7.14	7.44
LESS PERS CONT FOR SOC INS....	3613	3667	3696	3726	3860	3943	4006	4057	4173	4263	4347	3336	3675	3967
% CHG PREV QTR SAAR.....	26.17	6.10	3.17	3.31	15.20	8.92	6.56	5.15	11.92	8.90	8.13	12.75	10.16	7.93
% CHG SAME QTR LAST YR.....	11.65	10.38	9.40	9.29	6.83	7.54	8.41	8.89	8.11	8.10	8.50	12.75	10.16	7.93
RESIDENCE ADJUSTMENT.....	-781	-799	-817	-836	-878	-896	-915	-934	-979	-999	-1019	-736	-808	-906
% CHG PREV QTR SAAR.....	2.60	9.65	9.43	9.34	21.79	8.53	8.50	8.50	21.13	8.09	8.22	6.63	9.87	12.03
% CHG SAME QTR LAST YR.....	11.73	10.69	9.57	7.71	12.43	12.14	11.90	11.69	11.54	11.42	11.35	6.63	9.87	12.03
TOTAL PERSONAL INCOME (82 $)....	55750	55233	55261	55392	55641	55966	56285	56575	57109	57513	57937	54001	55409	56117
% CHG PREV QTR SAAR.....	4.71	-3.66	0.20	0.95	1.81	2.36	2.30	2.08	3.83	2.86	2.98	3.47	2.61	1.28
% CHG SAME QTR LAST YR.....	5.15	3.01	1.86	0.51	-0.20	1.33	1.85	2.14	2.64	2.77	2.93	3.47	2.61	1.28

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 3: TENNESSEE NONAGRICULTURAL EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORY			FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	2055.7	2084.1	2081.4	2098.9	2059.9	2101.8	2107.6	2125.9	2091.8	2140.2	2152.9	2065.9	2080.1	2098.8
% CHG SAME QTR LAST YR	1.25	0.51	0.58	0.42	0.20	0.85	1.26	1.29	1.55	1.83	2.15	2.70	0.69	0.90
MINING	6.4	6.6	6.5	6.5	6.1	6.2	6.1	6.1	5.6	5.8	5.8	6.7	6.5	6.1
% CHG SAME QTR LAST YR	-2.55	-4.81	-5.69	-1.41	-4.86	-5.72	-6.48	-6.73	-6.77	-6.29	-5.29	-0.49	-3.65	-5.95
CONSTRUCTION	87.3	91.9	94.8	92.0	84.0	91.2	95.5	93.2	85.5	92.9	97.2	94.4	91.5	91.0
% CHG SAME QTR LAST YR	-1.47	-4.17	-3.27	-3.54	-3.79	-0.78	0.78	1.38	1.80	1.88	1.79	-0.79	-3.14	-0.55
MANUFACTURING	508.9	511.6	513.0	514.1	512.6	516.1	516.7	516.9	514.9	519.6	521.9	508.2	511.9	515.6
% CHG SAME QTR LAST YR	0.67	0.56	0.91	0.80	0.72	0.89	0.73	0.53	0.44	0.67	1.00	2.16	0.73	0.72
DURABLE GOODS	254.1	255.1	254.1	255.4	257.1	259.2	258.7	259.8	260.2	263.0	262.7	251.2	254.7	258.7
% CHG SAME QTR LAST YR	2.08	1.22	1.18	1.13	1.15	1.61	1.81	1.72	1.21	1.46	1.55	2.77	1.40	1.57
NONDURABLE GOODS	254.8	256.5	258.9	258.7	255.6	256.9	258.1	257.1	254.7	256.6	259.2	257.0	257.2	256.9
% CHG SAME QTR LAST YR	-0.70	-0.09	0.64	0.48	0.30	0.16	-0.33	-0.65	-0.33	-0.13	0.45	1.57	0.08	-0.13
TRADE	483.6	491.0	490.8	498.2	479.6	491.7	497.9	506.4	488.6	501.9	509.2	488.2	490.9	493.9
% CHG SAME QTR LAST YR	1.33	0.52	-0.08	0.46	-0.84	0.15	1.47	1.64	1.89	2.07	2.26	2.30	0.55	0.61
SERVICES	428.2	442.3	446.0	441.7	435.9	450.8	457.1	451.8	449.1	467.8	477.6	430.0	439.5	448.9
% CHG SAME QTR LAST YR	2.60	2.19	2.26	1.85	1.80	1.93	2.50	2.30	3.04	3.76	4.48	5.15	2.22	2.13
FIN,INS,REAL EST	104.9	106.2	106.6	106.3	105.9	108.1	108.9	108.5	108.2	110.7	111.7	103.9	106.0	107.9
% CHG SAME QTR LAST YR	3.01	2.15	1.55	1.49	0.98	1.80	2.17	2.12	2.21	2.36	2.52	2.40	2.04	1.77
TRANS,COMM,PUB UTIL	109.6	110.2	109.1	109.5	107.7	109.6	111.1	111.6	110.0	112.1	113.8	108.8	109.6	110.0
% CHG SAME QTR LAST YR	3.53	1.51	-1.05	-0.88	-1.72	-0.50	1.83	1.94	2.12	2.23	2.43	5.18	0.75	0.38
GOVERNMENT	326.8	324.4	314.7	330.7	328.1	328.0	314.2	331.4	329.8	329.5	315.7	325.6	324.1	325.4
% CHG SAME QTR LAST YR	-0.16	-1.13	0.32	-0.83	0.41	1.12	-0.17	0.22	0.50	0.44	0.50	1.39	-0.46	0.40
FEDERAL,CIVILIAN	60.7	60.7	60.9	59.2	59.4	60.1	59.0	58.4	59.5	60.0	59.0	63.5	60.4	59.2
% CHG SAME QTR LAST YR	-7.42	-7.32	-2.58	-2.19	-2.11	-1.05	-3.12	-1.32	0.19	-0.18	0.08	0.24	-4.96	-1.91
STATE AND LOCAL	266.1	263.7	253.8	271.5	268.7	267.9	255.2	273.0	270.2	269.5	256.7	262.1	263.8	266.2
% CHG SAME QTR LAST YR	1.66	0.42	1.04	-0.53	0.98	1.62	0.54	0.56	0.57	0.58	0.59	1.67	0.63	0.93

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 4: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS.....	254.1	255.1	254.1	255.4	257.1	259.2	258.7	259.8	260.2	263.0	262.7	251.2	254.7	258.7
% CHG SAME QTR LAST YR.....	2.08	1.22	1.18	1.13	1.15	1.61	1.81	1.72	1.21	1.46	1.55	2.77	1.40	1.57
LUMBER AND WOOD.....	19.7	19.9	20.0	19.6	19.0	20.1	20.2	19.8	19.2	20.4	20.5	20.1	19.8	19.8
% CHG SAME QTR LAST YR.....	-2.47	-2.93	0.63	-0.66	-3.68	1.22	1.20	1.24	1.14	1.26	1.38	-5.64	-1.38	0.00
FURNITURE AND FIXTURES.....	28.2	28.8	29.0	29.8	29.8	30.0	29.9	30.5	30.2	30.1	29.8	26.5	29.0	30.0
% CHG SAME QTR LAST YR.....	9.43	10.63	10.44	7.25	5.52	4.14	3.32	2.15	1.26	0.49	-0.44	6.97	9.40	3.76
STONE,CLAY AND GLASS.....	15.1	15.1	15.2	15.0	14.7	14.9	15.0	15.0	14.8	15.0	15.2	15.1	15.1	14.9
% CHG SAME QTR LAST YR.....	0.89	-0.44	1.26	-0.54	-2.58	-1.78	-0.94	0.12	0.82	0.89	0.91	-1.26	0.29	-1.30
PRIMARY METALS.....	15.8	15.5	15.5	15.7	15.7	15.5	15.4	15.6	15.5	15.4	15.3	15.4	15.6	15.5
% CHG SAME QTR LAST YR.....	3.05	1.75	1.77	0.14	-0.65	-0.05	-0.53	-0.70	-0.81	-0.77	-0.57	-2.23	1.67	-0.48
FABRICATED METALS.....	41.7	41.4	41.3	41.5	41.6	41.6	41.8	42.2	42.5	42.5	42.7	42.0	41.5	41.8
% CHG SAME QTR LAST YR.....	0.16	-1.19	-2.37	-1.65	-0.21	0.44	1.24	1.73	2.02	2.14	2.14	5.28	-1.27	0.80
NONELECTRICAL MACHINERY.....	38.2	38.2	36.9	37.2	37.9	37.8	36.8	37.6	38.6	38.7	37.7	37.6	37.6	37.5
% CHG SAME QTR LAST YR.....	2.50	0.79	-2.11	-1.10	-0.80	-0.84	-0.15	1.03	1.79	2.19	2.29	3.42	0.02	-0.20
ELECTRICAL MACHINERY.....	38.9	39.3	39.5	39.8	39.5	39.8	39.8	40.0	39.9	40.3	40.6	38.5	39.4	39.8
% CHG SAME QTR LAST YR.....	3.64	1.90	1.64	1.78	1.52	1.11	0.81	0.61	0.97	1.29	1.91	7.79	2.23	1.01
TRANSPORTATION EQUIPMENT.....	34.4	34.3	34.1	34.6	36.9	37.2	36.8	36.7	37.5	38.2	38.1	34.0	34.3	36.9
% CHG SAME QTR LAST YR.....	-0.77	-0.58	1.29	3.35	7.37	8.49	8.16	6.27	1.61	2.67	3.42	-1.97	0.80	7.57
INSTRUMENTS.....	10.0	10.1	10.4	10.5	10.4	10.3	10.5	10.5	10.3	10.3	10.5	9.6	10.3	10.4
% CHG SAME QTR LAST YR.....	6.38	7.07	7.24	5.99	3.75	2.17	0.71	-0.06	-0.36	-0.43	-0.37	3.13	6.67	1.61
MISCELLANEOUS.....	12.1	12.5	12.2	11.8	11.6	12.1	12.2	11.9	11.7	12.3	12.3	12.4	12.2	11.9
% CHG SAME QTR LAST YR.....	-0.55	-2.34	-2.63	-2.21	-4.25	-3.74	-0.10	0.85	0.64	1.54	0.82	9.08	-1.94	-1.84

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 5: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS	254.8	256.5	258.9	258.7	255.6	256.9	258.1	257.1	254.7	256.6	259.2	257.0	257.2	256.9
% CHG SAME QTR LAST YR	-0.70	-0.09	0.64	0.48	0.30	0.16	-0.33	-0.65	-0.33	-0.13	0.45	1.57	0.08	-0.13
FOOD	39.0	39.5	40.6	39.8	39.1	39.6	40.7	39.9	39.3	39.7	40.9	39.5	39.7	39.8
% CHG SAME QTR LAST YR	1.39	0.59	1.45	-1.06	0.28	0.26	0.32	0.33	0.38	0.37	0.35	2.13	0.58	0.30
TOBACCO	1.5	1.0	1.0	1.5	1.8	1.2	1.1	1.6	1.8	1.2	1.1	1.3	1.3	1.4
% CHG SAME QTR LAST YR	-14.81	-11.76	-2.13	15.78	18.29	18.47	8.28	3.95	1.93	0.94	0.44	-6.47	-4.10	12.02
TEXTILES	22.1	22.1	22.1	22.3	22.1	22.1	21.7	21.8	21.9	21.8	21.7	23.0	22.1	21.9
% CHG SAME QTR LAST YR	-8.31	-6.08	-1.36	0.63	0.30	-0.03	-1.42	-2.24	-1.22	-1.64	-0.20	-3.99	-3.91	-0.85
APPAREL	63.0	62.9	62.5	63.8	62.2	62.2	61.5	62.0	60.7	60.8	60.9	64.9	63.1	62.0
% CHG SAME QTR LAST YR	-5.31	-3.13	-2.22	-0.42	-1.28	-1.21	-1.61	-2.76	-2.40	-2.24	-1.08	0.34	-2.80	-1.72
PAPER	19.4	19.9	20.5	19.9	19.5	20.3	20.8	20.3	19.9	20.8	21.3	19.5	19.9	20.2
% CHG SAME QTR LAST YR	3.00	1.70	2.67	1.35	0.24	2.09	1.46	2.04	2.29	2.49	2.31	3.45	2.18	1.47
PRINTING AND PUBLISHING	35.8	35.9	36.0	36.1	36.1	36.4	36.5	36.7	36.9	37.3	37.5	35.3	36.0	36.4
% CHG SAME QTR LAST YR	3.46	1.99	1.47	0.82	0.67	1.33	1.36	1.81	2.33	2.53	2.70	3.98	1.92	1.30
CHEMICALS	38.4	39.1	39.3	38.9	38.8	38.8	38.8	38.4	38.5	38.8	39.1	38.1	38.9	38.7
% CHG SAME QTR LAST YR	1.95	3.53	1.56	1.48	0.94	-0.75	-1.22	-1.23	-0.79	0.05	0.69	1.87	2.12	-0.57
PETROLEUM REFINING	0.7	0.8	0.9	0.9	0.8	0.9	0.9	.9	0.8	0.8	0.9	0.8	0.8	0.8
% CHG SAME QTR LAST YR	-12.50	0.00	10.73	6.96	12.04	6.45	0.98	0.76	0.27	-0.48	-0.74	-12.73	1.30	4.66
RUBBER AND PLASTICS	25.3	25.8	26.2	26.3	26.0	26.4	26.5	26.4	26.0	26.4	26.7	25.0	25.9	26.3
% CHG SAME QTR LAST YR	3.83	3.06	3.07	3.77	2.87	2.24	0.94	0.33	-0.02	0.23	0.81	4.81	3.43	1.58
LEATHER	9.4	9.5	9.7	9.4	9.1	9.1	9.4	9.1	8.8	8.9	9.2	9.5	9.5	9.2
% CHG SAME QTR LAST YR	1.43	0.00	3.12	-5.47	-3.76	-3.47	-3.20	-2.96	-2.74	-2.54	-2.35	2.79	-0.31	-3.35

SOURCE: QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 6: TENNESSEE NONAGRICULTURAL EMPLOYMENT
THOUSANDS OF SEASONALLY ADJUSTED JOBS

	HISTORY				FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	2085.0	2077.6	2075.9	2082.5	2088.5	2095.3	2101.9	2109.3	2121.1	2133.5	2146.7	2065.9	2080.2	2098.8
% CHG PREV QTR SAAR	2.19	-1.41	-0.31	1.27	1.17	1.31	1.25	1.43	2.25	2.36	2.50	2.70	0.69	0.89
% CHG SAME QTR LAST YR	1.22	0.53	0.59	0.42	0.17	0.86	1.25	1.29	1.56	1.82	2.13	2.70	0.69	0.89
MINING	6.6	6.6	6.5	6.4	6.3	6.2	6.1	6.0	5.9	5.8	5.7	6.8	6.5	6.1
% CHG PREV QTR SAAR	8.61	-3.48	-4.27	-5.81	-6.04	-6.67	-7.38	-6.84	-6.18	-4.75	-3.37	-0.51	-3.65	-5.95
% CHG SAME QTR LAST YR	-2.65	-4.78	-5.64	-1.40	-4.91	-5.70	-6.48	-6.73	-6.77	-6.29	-5.29	-0.51	-3.65	-5.95
CONSTRUCTION	94.1	91.4	90.4	90.3	90.4	90.7	91.1	91.6	92.1	92.4	92.8	94.5	91.6	91.0
% CHG PREV QTR SAAR	1.77	-10.75	-4.31	-0.34	0.34	1.36	1.76	2.04	2.04	1.68	1.38	-0.74	-3.11	-0.65
% CHG SAME QTR LAST YR	-1.62	-4.13	-3.19	-3.53	-3.87	-0.76	0.78	1.38	1.80	1.88	1.79	-0.74	-3.11	-0.65
MANUFACTURING	511.6	510.8	512.2	513.3	515.1	515.4	515.9	516.0	517.4	518.8	521.1	508.2	512.0	515.6
% CHG PREV QTR SAAR	1.87	-0.62	1.07	0.88	1.42	0.26	0.38	0.09	1.02	1.16	1.75	2.16	0.73	0.72
% CHG SAME QTR LAST YR	0.64	0.59	0.91	0.79	0.68	0.91	0.74	0.54	0.44	0.66	1.00	2.16	0.73	0.72
DURABLE GOODS	254.9	253.9	254.5	255.5	257.7	258.1	259.1	259.9	260.8	261.8	263.1	251.2	254.7	258.7
% CHG PREV QTR SAAR	3.57	-1.53	0.88	1.64	3.50	0.53	1.59	1.32	1.41	1.50	1.99	2.77	1.40	1.57
% CHG SAME QTR LAST YR	2.01	1.27	1.20	1.13	1.11	1.63	1.81	1.73	1.21	1.45	1.56	2.77	1.40	1.57
NONDURABLE GOODS	256.7	256.9	257.7	257.8	257.4	257.4	256.8	256.1	256.5	257.0	258.0	257.0	257.2	256.9
% CHG PREV QTR SAAR	0.22	0.28	1.26	0.13	-0.60	0.00	-0.81	-1.14	0.63	0.81	1.50	1.58	0.08	-0.13
% CHG SAME QTR LAST YR	-0.68	-0.07	0.63	0.47	0.26	0.19	-0.32	-0.64	-0.33	-0.13	0.45	1.58	0.08	-0.13
TRADE	494.9	492.0	487.7	489.2	490.7	492.7	494.9	497.2	500.0	502.9	506.0	488.2	490.9	493.9
% CHG PREV QTR SAAR	6.65	-2.34	-3.42	1.21	1.24	1.64	1.76	1.91	2.24	2.38	2.51	2.32	0.56	0.60
% CHG SAME QTR LAST YR	1.32	0.52	-0.06	0.45	-0.85	0.15	1.47	1.64	1.89	2.07	2.26	2.32	0.56	0.60
SERVICES	437.4	439.0	438.9	442.9	445.2	447.5	449.8	453.1	458.7	464.3	470.0	430.0	439.5	448.9
% CHG PREV QTR SAAR	2.31	1.50	-0.11	3.74	2.07	2.08	2.10	2.94	5.05	4.97	4.98	5.17	2.22	2.13
% CHG SAME QTR LAST YR	2.58	2.20	2.27	1.85	1.79	1.94	2.50	2.30	3.04	3.76	4.48	5.17	2.22	2.13
FIN,INS,REAL EST	106.0	105.7	105.8	106.5	107.0	107.6	108.1	108.7	109.4	110.1	110.9	103.9	106.0	107.9
% CHG PREV QTR SAAR	4.10	-1.23	0.66	2.47	2.06	2.05	2.11	2.25	2.44	2.62	2.75	2.40	2.05	1.77
% CHG SAME QTR LAST YR	3.01	2.15	1.56	1.48	0.98	1.81	2.17	2.12	2.21	2.36	2.52	2.40	2.05	1.77
TRANS,COMM,PUB UTIL	111.1	110.3	108.3	108.7	109.2	109.8	110.2	110.8	111.5	112.3	112.9	108.8	109.6	110.0
% CHG PREV QTR SAAR	5.65	-2.86	-7.34	1.67	1.79	2.26	1.59	2.12	2.52	2.71	2.36	5.18	0.76	0.36
% CHG SAME QTR LAST YR	3.45	1.53	-1.07	-0.84	-1.76	-0.49	1.83	1.94	2.12	2.23	2.43	5.18	0.76	0.36
GOVERNMENT	323.3	321.8	326.2	325.2	324.6	325.4	325.7	325.9	326.3	326.9	327.4	325.6	324.1	325.4
% CHG PREV QTR SAAR	-5.52	-1.83	5.54	-1.22	-0.70	1.00	0.34	0.21	0.45	0.76	0.58	1.38	-0.45	0.40
% CHG SAME QTR LAST YR	-0.17	-1.12	0.32	-0.84	0.41	1.12	-0.15	0.21	0.50	0.44	0.50	1.38	-0.45	0.40
FEDERAL,CIVILIAN	60.3	60.1	61.2	59.9	59.0	59.4	59.3	59.1	59.1	59.3	59.4	63.5	60.4	59.2
% CHG PREV QTR SAAR	-6.19	-1.45	8.09	-8.41	-6.04	3.04	-0.66	-1.41	-0.16	1.51	0.42	0.19	-4.94	-1.92
% CHG SAME QTR LAST YR	-7.49	-7.33	-2.53	-2.19	-2.15	-1.05	-3.12	-1.32	0.19	-0.18	0.08	0.19	-4.94	-1.92
STATE AND LOCAL	263.0	261.8	265.0	265.3	265.6	266.0	266.4	266.8	267.2	267.6	268.0	262.1	263.8	266.2
% CHG PREV QTR SAAR	-5.37	-1.92	4.96	0.50	0.54	0.55	0.57	0.58	0.59	0.60	0.61	1.67	0.64	0.93
% CHG SAME QTR LAST YR	1.68	0.42	1.01	-0.53	0.99	1.62	0.54	0.56	0.57	0.58	0.59	1.67	0.64	0.93

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 7: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
SEASONALLY ADJUSTED
(THOUSANDS OF JOBS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS	254.9	253.9	254.5	255.5	257.7	258.1	259.1	259.9	260.8	261.8	263.1	251.2	254.7	258.7
% CHG PREV QTR SAAR	3.57	-1.53	0.88	1.64	3.50	0.53	1.59	1.32	1.41	1.50	1.99	2.77	1.40	1.57
% CHG SAME QTR LAST YR	2.01	1.27	1.20	1.13	1.11	1.63	1.81	1.73	1.21	1.45	1.56	2.77	1.40	1.57
LUMBER AND WOOD	20.5	19.5	19.6	19.6	19.7	19.8	19.8	19.9	19.9	20.0	20.1	20.1	19.8	19.8
% CHG PREV QTR SAAR	15.36	-17.52	1.07	1.14	1.85	1.08	0.72	1.32	1.45	1.54	1.19	-5.57	-1.38	-0.05
% CHG SAME QTR LAST YR	-2.58	-2.80	0.67	-0.69	-3.74	1.28	1.20	1.24	1.14	1.26	1.38	-5.57	-1.38	-0.05
FURNITURE AND FIXTURES	28.2	28.7	29.3	29.6	29.8	29.9	30.2	30.3	30.1	30.1	30.1	26.5	29.0	30.0
% CHG PREV QTR SAAR	8.69	7.60	7.47	5.29	1.84	2.06	4.14	0.58	-1.63	-1.01	0.31	6.97	9.41	3.76
% CHG SAME QTR LAST YR	9.44	10.62	10.43	7.25	5.52	4.14	3.32	2.15	1.26	0.49	-0.44	6.97	9.41	3.76
STONE,CLAY AND GLASS	15.3	15.2	15.1	14.9	14.9	14.9	14.9	15.0	15.0	15.0	15.0	15.1	15.1	14.9
% CHG PREV QTR SAAR	6.62	-2.90	-2.53	-2.99	-2.01	0.48	0.80	1.22	0.79	0.74	0.87	-1.27	0.29	-1.31
% CHG SAME QTR LAST YR	0.84	-0.42	1.27	-0.53	-2.61	-1.77	-0.94	0.12	0.82	0.89	0.91	-1.27	0.29	-1.31
PRIMARY METALS	15.7	15.6	15.6	15.6	15.6	15.6	15.5	15.5	15.5	15.4	15.4	15.4	15.6	15.5
% CHG PREV QTR SAAR	2.75	-2.84	1.13	-0.43	-0.43	-0.42	-0.83	-1.10	-0.88	-0.26	-0.04	-2.22	1.67	-0.48
% CHG SAME QTR LAST YR	3.05	1.78	1.75	0.13	-0.65	-0.04	-0.53	-0.70	-0.81	-0.77	-0.57	-2.22	1.67	-0.48
FABRICATED METALS	41.7	41.5	41.4	41.4	41.5	41.7	41.9	42.2	42.4	42.6	42.8	42.0	41.5	41.8
% CHG PREV QTR SAAR	-4.34	-1.31	-1.09	0.34	0.91	1.75	1.99	2.28	2.05	2.23	2.02	5.26	-1.27	0.79
% CHG SAME QTR LAST YR	-0.01	-1.13	-2.31	-1.62	-0.29	0.47	1.24	1.73	2.02	2.14	2.14	5.26	-1.27	0.79
NONELECTRICAL MACHINERY	37.7	37.7	37.6	37.5	37.4	37.4	37.6	37.9	38.0	38.2	38.4	37.6	37.6	37.5
% CHG PREV QTR SAAR	-2.28	-0.27	-0.27	-1.78	-0.99	0.06	2.14	2.94	2.03	1.63	2.57	3.45	0.01	-0.18
% CHG SAME QTR LAST YR	2.44	0.99	-2.10	-1.16	-0.83	-0.75	-0.15	1.03	1.79	2.19	2.29	3.45	0.01	-0.18
ELECTRICAL MACHINERY	39.1	39.3	39.5	39.6	39.7	39.8	39.8	39.9	40.1	40.3	40.6	38.5	39.4	39.8
% CHG PREV QTR SAAR	1.96	2.28	1.68	1.22	0.89	0.66	0.49	0.39	2.36	1.92	2.99	7.78	2.23	1.01
% CHG SAME QTR LAST YR	3.63	1.90	1.64	1.78	1.51	1.11	0.81	0.61	0.97	1.29	1.91	7.78	2.23	1.01
TRANSPORTATION EQUIPMENT	34.3	33.9	34.1	34.9	36.8	36.8	36.9	37.1	37.4	37.8	38.1	34.0	34.3	36.9
% CHG PREV QTR SAAR	6.21	-4.68	2.24	10.29	23.60	-0.61	1.03	2.76	3.31	3.60	4.00	-1.99	0.81	7.56
% CHG SAME QTR LAST YR	-0.79	-0.59	1.31	3.36	7.36	8.49	8.16	6.27	1.61	2.67	3.42	-1.99	0.81	7.56
INSTRUMENTS	10.1	10.2	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	9.6	10.3	10.4
% CHG PREV QTR SAAR	9.27	5.93	5.95	2.69	0.57	-0.14	-0.26	-0.41	-0.61	-0.44	-0.01	3.13	6.68	1.64
% CHG SAME QTR LAST YR	6.41	7.21	7.18	5.94	3.76	2.24	0.71	-0.06	-0.36	-0.43	-0.37	3.13	6.68	1.64
MISCELLANEOUS	12.5	12.3	12.0	11.9	11.9	11.9	12.0	12.0	12.0	12.1	12.1	12.4	12.2	11.9
% CHG PREV QTR SAAR	11.47	-3.39	-10.07	-5.38	2.34	-1.81	4.75	-1.72	1.48	1.77	1.81	9.09	-1.94	-1.87
% CHG SAME QTR LAST YR	-0.49	-2.53	-2.59	-2.16	-4.23	-3.84	-0.10	0.85	0.64	1.54	0.82	9.09	-1.94	-1.87

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 8: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
SEASONALLY ADJUSTED
(THOUSANDS OF JOBS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS	256.7	256.9	257.7	257.8	257.4	257.4	256.8	256.1	256.5	257.0	258.0	257.0	257.2	256.9
% CHG PREV QTR SAAR	0.22	0.28	1.26	0.13	-0.60	0.00	-0.81	-1.14	0.63	0.81	1.50	1.58	0.08	-0.13
% CHG SAME QTR LAST YR	-0.68	-0.07	0.63	0.47	0.26	0.19	-0.32	-0.64	-0.33	-0.13	0.45	1.58	0.08	-0.13
FOOD	39.7	39.7	39.7	39.8	39.8	39.8	39.9	39.9	39.9	40.0	40.0	39.5	39.7	39.8
% CHG PREV QTR SAAR	-5.00	0.26	0.16	0.41	0.18	0.36	0.33	0.47	0.35	0.33	0.26	2.13	0.59	0.30
% CHG SAME QTR LAST YR	1.34	0.64	1.47	-1.07	0.26	0.28	0.32	0.33	0.38	0.37	0.35	2.13	0.59	0.30
TOBACCO	1.2	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.4
% CHG PREV QTR SAAR	-1.57	3.36	47.19	18.94	8.69	4.19	2.07	1.01	0.49	0.21	0.07	-7.16	-3.84	11.92
% CHG SAME QTR LAST YR	-14.62	-11.49	-2.18	15.52	18.42	18.66	8.28	3.95	1.93	0.94	0.44	-7.16	-3.84	11.92
TEXTILES	22.1	22.1	22.2	22.2	22.1	22.1	21.9	21.7	21.9	21.7	21.8	23.0	22.1	21.9
% CHG PREV QTR SAAR	0.08	0.55	1.68	0.17	-1.28	-0.66	-3.87	-3.13	2.91	-2.34	1.90	-4.00	-3.91	-0.86
% CHG SAME QTR LAST YR	-8.36	-6.08	-1.31	0.62	0.27	-0.03	-1.42	-2.24	-1.22	-1.64	-0.20	-4.00	-3.91	-0.86
APPAREL	63.3	63.1	62.9	63.0	62.5	62.4	61.9	61.2	61.0	61.0	61.2	64.9	63.1	62.0
% CHG PREV QTR SAAR	0.27	-1.28	-1.15	0.34	-3.07	-0.76	-2.91	-4.25	-1.63	-0.10	1.77	0.35	-2.80	-1.71
% CHG SAME QTR LAST YR	-5.35	-3.06	-2.20	-0.46	-1.30	-1.17	-1.61	-2.76	-2.40	-2.24	-1.08	0.35	-2.80	-1.71
PAPER	20.0	19.8	20.0	20.0	20.1	20.2	20.3	20.4	20.5	20.7	20.8	19.5	19.9	20.2
% CHG PREV QTR SAAR	6.36	-5.11	4.89	-0.18	1.52	2.18	2.35	2.09	2.54	2.97	1.63	3.46	2.17	1.45
% CHG SAME QTR LAST YR	2.94	1.70	2.67	1.39	0.22	2.09	1.46	2.04	2.29	2.49	2.31	3.46	2.17	1.45
PRINTING AND PUBLISHING	35.9	35.9	36.0	36.1	36.1	36.3	36.5	36.7	37.0	37.3	37.5	35.3	36.0	36.4
% CHG PREV QTR SAAR	1.65	-0.67	1.96	0.43	0.93	2.07	2.03	2.22	2.98	2.88	2.70	3.97	1.92	1.29
% CHG SAME QTR LAST YR	3.44	2.01	1.45	0.84	0.66	1.34	1.36	1.81	2.33	2.53	2.70	3.97	1.92	1.29
CHEMICALS	38.5	39.0	39.1	39.0	38.9	38.7	38.6	38.5	38.6	38.8	38.9	38.1	38.9	38.7
% CHG PREV QTR SAAR	0.78	5.48	0.64	-0.89	-1.33	-1.42	-1.24	-0.94	0.44	1.98	1.31	1.87	2.12	-0.57
% CHG SAME QTR LAST YR	1.95	3.52	1.57	1.48	0.94	-0.75	-1.22	-1.23	-0.79	0.05	0.69	1.87	2.12	-0.57
PETROLEUM REFINING	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
% CHG PREV QTR SAAR	-16.10	27.07	23.31	-0.08	1.14	2.38	0.50	-0.96	-0.81	-0.66	-0.53	-12.49	0.89	4.84
% CHG SAME QTR LAST YR	-12.28	-0.32	10.63	7.06	12.18	6.28	0.98	0.76	0.27	-0.48	-0.74	-12.49	0.89	4.84
RUBBER AND PLASTICS	25.6	25.8	26.1	26.2	26.3	26.3	26.3	26.3	26.3	26.4	26.6	25.0	25.9	26.3
% CHG PREV QTR SAAR	6.11	2.75	5.23	1.01	2.63	0.22	-0.06	-1.41	1.20	1.22	2.27	4.82	3.44	1.60
% CHG SAME QTR LAST YR	3.88	3.10	3.03	3.75	2.89	2.25	0.94	0.33	-0.02	0.23	0.81	4.82	3.44	1.60
LEATHER	9.6	9.5	9.4	9.4	9.3	9.2	9.1	9.1	9.0	9.0	8.9	9.5	9.5	9.2
% CHG PREV QTR SAAR	-10.24	-4.13	-3.87	-3.58	-3.31	-3.07	-2.84	-2.63	-2.43	-2.25	-2.08	2.85	-0.31	-3.34
% CHG SAME QTR LAST YR	1.52	0.04	3.03	-5.50	-3.72	-3.46	-3.20	-2.96	-2.74	-2.54	-2.35	2.85	-0.31	-3.34

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 9: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORY				FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS	7.54	7.43	7.41	7.49	7.46	7.42	7.47	7.55	7.51	7.47	7.50	7.59	7.47	7.47
% CHG SAME QTR LAST YR	-2.13	-2.00	-1.59	-1.02	-1.11	-0.09	0.74	0.80	0.71	0.68	0.47	-3.06	-1.69	0.08
LUMBER AND WOOD	4.94	4.82	4.85	4.82	4.79	4.82	4.83	4.83	4.80	4.82	4.83	5.08	4.86	4.82
% CHG SAME QTR LAST YR	-2.18	-5.55	-5.09	-4.46	-3.03	-0.01	-0.25	0.10	0.14	0.11	-0.14	-0.76	-4.33	-0.81
FURNITURE AND FIXTURES	6.10	6.08	5.86	5.90	5.91	5.98	5.87	5.92	5.94	6.01	5.89	6.01	5.99	5.92
% CHG SAME QTR LAST YR	3.90	0.77	-1.95	-4.04	-3.19	-1.64	0.06	0.47	0.56	0.56	0.33	-2.90	-0.37	-1.10
STONE,CLAY AND GLASS	10.48	9.66	9.26	9.38	9.55	9.35	9.31	9.46	9.64	9.43	9.37	9.77	9.69	9.42
% CHG SAME QTR LAST YR	5.24	-1.62	-2.38	-4.50	-8.92	-3.27	0.56	0.89	0.93	0.90	0.65	1.27	-0.78	-2.88
PRIMARY METALS	8.99	8.87	9.02	9.00	8.85	8.83	9.03	9.03	8.90	8.88	9.06	9.24	8.97	8.94
% CHG SAME QTR LAST YR	-3.54	-4.46	-2.28	-1.23	-1.61	-0.53	0.10	0.42	0.58	0.58	0.26	-5.23	-2.89	-0.40
FABRICATED METALS	7.98	7.91	7.99	8.00	8.02	7.90	7.96	8.01	8.04	7.92	7.97	7.97	7.97	7.97
% CHG SAME QTR LAST YR	-0.63	-0.71	-0.25	1.68	0.51	-0.17	-0.31	0.21	0.22	0.23	0.10	0.77	0.02	0.06
MACHINERY	7.32	7.29	7.22	7.24	7.21	7.22	7.20	7.26	7.23	7.23	7.21	7.43	7.27	7.22
% CHG SAME QTR LAST YR	-2.95	-1.88	-1.73	-2.11	-1.50	-0.93	-0.21	0.20	0.29	0.19	0.06	-1.92	-2.17	-0.61
INSTRUMENTS	7.49	7.47	7.49	7.39	7.50	7.47	7.49	7.42	7.54	7.50	7.50	7.53	7.46	7.47
% CHG SAME QTR LAST YR	-2.29	-1.60	-0.41	0.37	0.22	0.05	-0.03	0.36	0.43	0.42	0.19	0.62	-1.00	0.15

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 10: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS.....	6.79	6.75	6.78	6.78	6.75	6.75	6.81	6.83	6.79	6.79	6.83	6.77	6.77	6.79
% CHG SAME QTR LAST YR.....	0.32	-0.10	0.12	-0.27	-0.58	0.08	0.45	0.73	0.63	0.49	0.27	-0.54	0.02	0.17
FOOD.....	6.73	6.68	6.61	6.63	6.64	6.63	6.60	6.65	6.65	6.64	6.60	6.81	6.66	6.63
% CHG SAME QTR LAST YR.....	-1.67	-2.45	-2.65	-1.63	-1.34	-0.85	-0.09	0.26	0.15	0.20	-0.06	-2.96	-2.10	-0.51
TEXTILES.....	5.77	5.73	5.79	5.76	5.76	5.76	5.80	5.78	5.78	5.78	5.80	5.69	5.76	5.77
% CHG SAME QTR LAST YR.....	2.41	0.36	1.71	0.75	-0.18	0.53	0.13	0.38	0.52	0.33	0.09	0.39	1.30	0.21
APPAREL.....	4.49	4.44	4.37	4.35	4.39	4.36	4.31	4.31	4.34	4.30	4.24	4.50	4.41	4.34
% CHG SAME QTR LAST YR.....	-0.85	-2.22	-2.58	-2.44	-2.29	-1.66	-1.40	-1.05	-1.27	-1.35	-1.45	-1.13	-2.02	-1.61
PAPER.....	9.09	8.89	8.82	8.87	8.94	8.93	8.86	8.93	9.01	8.99	8.90	8.97	8.92	8.92
% CHG SAME QTR LAST YR.....	-2.02	-0.64	0.47	0.05	-1.65	0.53	0.42	0.70	0.73	0.69	0.45	-0.71	-0.56	-0.01
CHEMICALS.....	9.19	9.13	9.14	9.12	9.04	9.09	9.19	9.19	9.10	9.15	9.23	9.19	9.15	9.12
% CHG SAME QTR LAST YR.....	1.12	-0.08	-0.19	-2.51	-1.71	-0.48	0.47	0.73	0.75	0.70	0.45	-0.09	-0.43	-0.25
RUBBER.....	8.32	8.44	8.51	8.62	8.48	8.48	8.52	8.66	8.51	8.52	8.54	8.18	8.47	8.54
% CHG SAME QTR LAST YR.....	2.43	4.52	4.32	3.14	1.90	0.57	0.18	0.44	0.38	0.42	0.18	1.54	3.60	0.77
LEATHER.....	5.04	4.97	4.97	4.89	5.02	5.01	4.96	4.89	5.02	5.00	4.94	4.90	4.97	4.97
% CHG SAME QTR LAST YR.....	0.70	1.09	2.58	0.72	-0.37	0.70	-0.21	0.01	0.00	-0.07	-0.33	-4.88	1.27	0.03

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 11: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS.....	7.53	7.47	7.43	7.44	7.45	7.46	7.49	7.50	7.50	7.51	7.52	7.59	7.47	7.47
% CHG PREV QTR SAAR.....	0.79	-3.23	-1.95	0.33	0.54	0.72	1.39	0.57	0.19	0.58	0.54	-3.05	-1.69	0.08
% CHG SAME QTR LAST YR.....	-2.10	-2.02	-1.60	-1.03	-1.09	-0.10	0.74	0.80	0.71	0.68	0.47	-3.05	-1.69	0.08
LUMBER AND WOOD.....	4.96	4.81	4.83	4.82	4.81	4.81	4.82	4.82	4.82	4.82	4.82	5.08	4.86	4.82
% CHG PREV QTR SAAR.....	-6.37	-11.63	1.93	-1.18	-0.69	0.00	0.87	0.21	-0.52	-0.12	-0.13	-0.75	-4.32	-0.81
% CHG SAME QTR LAST YR.....	-2.20	-5.52	-5.12	-4.45	-3.04	0.01	-0.25	0.10	0.14	0.11	-0.14	-0.75	-4.32	-0.81
FURNITURE AND FIXTURES.....	6.10	6.01	5.92	5.91	5.90	5.91	5.93	5.94	5.94	5.94	5.95	6.01	5.99	5.92
% CHG PREV QTR SAAR.....	-3.67	-5.53	-5.68	-0.99	-0.42	0.36	1.30	0.64	-0.07	0.37	0.38	-2.89	-0.39	-1.11
% CHG SAME QTR LAST YR.....	3.92	0.63	-1.95	-3.98	-3.18	-1.71	0.06	0.47	0.56	0.56	0.33	-2.89	-0.39	-1.11
STONE,CLAY AND GLASS.....	10.30	9.71	9.38	9.37	9.37	9.39	9.43	9.46	9.46	9.48	9.49	9.77	9.69	9.41
% CHG PREV QTR SAAR.....	21.26	-20.78	-13.01	-0.36	0.10	0.81	1.69	0.98	0.25	0.67	0.68	1.26	-0.83	-2.85
% CHG SAME QTR LAST YR.....	5.17	-1.66	-2.36	-4.48	-8.95	-3.29	0.56	0.89	0.93	0.90	0.65	1.26	-0.83	-2.85
PRIMARY METALS.....	9.06	8.96	8.94	8.92	8.91	8.92	8.95	8.96	8.96	8.97	8.97	9.24	8.97	8.94
% CHG PREV QTR SAAR.....	0.92	-4.07	-0.89	-0.78	-0.55	0.23	1.50	0.50	0.11	0.22	0.23	-5.22	-2.89	-0.40
% CHG SAME QTR LAST YR.....	-3.50	-4.40	-2.39	-1.22	-1.58	-0.50	0.10	0.42	0.58	0.58	0.26	-5.22	-2.89	-0.40
FABRICATED METALS.....	7.92	7.98	8.00	7.97	7.96	7.96	7.98	7.99	7.98	7.98	7.99	7.97	7.97	7.97
% CHG PREV QTR SAAR.....	4.17	3.02	1.20	-1.50	-0.50	-0.09	0.86	0.59	-0.47	-0.04	0.31	0.77	0.00	0.05
% CHG SAME QTR LAST YR.....	-0.57	-0.82	-0.27	1.70	0.54	-0.23	-0.31	0.21	0.22	0.23	0.10	0.77	0.00	0.05
MACHINERY.....	7.32	7.28	7.25	7.22	7.21	7.21	7.23	7.24	7.23	7.23	7.23	7.43	7.27	7.22
% CHG PREV QTR SAAR.....	-3.30	-1.93	-1.92	-1.36	-0.78	0.40	0.92	0.28	-0.42	0.01	0.40	-1.92	-2.17	-0.61
% CHG SAME QTR LAST YR.....	-2.94	-1.87	-1.72	-2.13	-1.50	-0.92	-0.21	0.20	0.29	0.19	0.06	-1.92	-2.17	-0.61
INSTRUMENTS.....	7.43	7.46	7.48	7.46	7.45	7.46	7.48	7.49	7.48	7.49	7.49	7.53	7.46	7.47
% CHG PREV QTR SAAR.....	-0.23	1.36	1.39	-0.92	-0.78	0.35	1.26	0.61	-0.49	0.32	0.32	0.62	-1.00	0.15
% CHG SAME QTR LAST YR.....	-2.22	-1.69	-0.45	0.39	0.25	0.00	-0.03	0.36	0.43	0.42	0.19	0.62	-1.00	0.15

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 12: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS	6.80	6.77	6.76	6.76	6.77	6.77	6.79	6.81	6.81	6.81	6.81	6.77	6.77	6.79
% CHG PREV QTR SAAR	1.56	-1.91	-0.35	-0.32	0.38	0.51	1.23	0.79	-0.02	-0.05	0.37	-0.53	0.01	0.17
% CHG SAME QTR LAST YR	0.36	-0.15	0.11	-0.26	-0.56	0.05	0.45	0.73	0.63	0.49	0.27	-0.53	0.01	0.17
FOOD	6.71	6.67	6.64	6.63	6.62	6.62	6.64	6.64	6.63	6.63	6.63	6.81	6.66	6.63
% CHG PREV QTR SAAR	-1.36	-2.33	-1.99	-0.87	-0.24	-0.23	1.00	0.52	-0.68	-0.04	-0.03	-2.95	-2.10	-0.51
% CHG SAME QTR LAST YR	-1.71	-2.41	-2.63	-1.64	-1.36	-0.83	-0.09	0.26	0.15	0.26	-0.06	-2.95	-2.10	-0.51
TEXTILES	5.77	5.74	5.77	5.77	5.76	5.77	5.78	5.79	5.79	5.79	5.79	5.69	5.76	5.77
% CHG PREV QTR SAAR	3.50	-2.20	2.51	-0.58	-0.38	0.60	0.88	0.42	0.16	-0.12	-0.10	0.39	1.30	0.21
% CHG SAME QTR LAST YR	2.41	0.34	1.69	0.78	-0.18	0.53	0.13	0.38	0.52	0.33	0.09	0.39	1.30	0.21
APPAREL	4.46	4.42	4.39	4.37	4.36	4.35	4.33	4.33	4.31	4.29	4.27	4.50	4.41	4.34
% CHG PREV QTR SAAR	-1.68	-3.70	-2.45	-1.88	-1.06	-1.36	-1.31	-0.48	-1.92	-1.69	-1.72	-1.13	-2.03	-1.61
% CHG SAME QTR LAST YR	-0.82	-2.29	-2.58	-2.43	-2.28	-1.69	-1.40	-1.05	-1.27	-1.35	-1.45	-1.13	-2.03	-1.61
PAPER	9.04	8.85	8.89	8.89	8.89	8.90	8.93	8.95	8.95	8.96	8.97	8.97	8.92	8.92
% CHG PREV QTR SAAR	7.36	-7.91	1.69	-0.20	0.02	0.52	1.35	0.90	0.15	0.36	0.39	-0.72	-0.56	-0.02
% CHG SAME QTR LAST YR	-2.06	-0.68	0.48	0.09	-1.67	0.51	0.42	0.70	0.73	0.69	0.45	-0.72	-0.56	-0.02
CHEMICALS	9.25	9.16	9.09	9.09	9.09	9.11	9.14	9.16	9.16	9.17	9.18	9.19	9.15	9.12
% CHG PREV QTR SAAR	-3.26	-3.83	-2.64	-0.22	-0.01	0.81	1.29	0.84	0.07	0.60	0.31	-0.09	-0.43	-0.26
% CHG SAME QTR LAST YR	1.15	-0.16	-0.18	-2.50	-1.69	-0.52	0.47	0.73	0.75	0.70	0.45	-0.09	-0.43	-0.26
RUBBER AND PLASTICS	8.36	8.47	8.53	8.52	8.52	8.52	8.54	8.56	8.55	8.56	8.56	8.18	8.47	8.54
% CHG PREV QTR SAAR	4.70	5.73	2.60	-0.32	-0.12	0.01	1.17	0.71	-0.38	0.18	0.20	1.54	3.60	0.77
% CHG SAME QTR LAST YR	2.52	4.46	4.27	3.15	1.94	0.54	0.18	0.44	0.38	0.42	0.18	1.54	3.60	0.77
LEATHER	4.98	4.93	4.98	4.97	4.96	4.96	4.97	4.97	4.96	4.96	4.95	4.90	4.97	4.97
% CHG PREV QTR SAAR	3.85	-4.25	4.30	-0.75	-0.57	-0.14	0.62	0.14	-0.63	-0.42	-0.42	-4.86	1.26	0.03
% CHG SAME QTR LAST YR	0.72	1.07	2.56	0.73	-0.36	0.69	-0.21	0.01	0.00	-0.07	-0.33	-4.86	1.26	0.03

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 13: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS	9.65	9.64	9.72	9.93	10.00	10.06	10.22	10.44	10.52	10.60	10.78	9.45	9.73	10.18
% CHG SAME QTR LAST YR	2.26	2.66	3.13	3.75	3.60	4.34	5.14	5.15	5.24	5.37	5.49	0.76	2.95	4.56
LUMBER AND WOOD	6.32	6.25	6.35	6.40	6.42	6.53	6.61	6.68	6.72	6.84	6.93	6.32	6.33	6.56
% CHG SAME QTR LAST YR	2.21	-1.05	-0.54	0.15	1.59	4.42	4.10	4.42	4.64	4.77	4.85	3.16	0.18	3.63
FURNITURE AND FIXTURES	7.81	7.89	7.69	7.82	7.92	8.11	8.03	8.19	8.33	8.53	8.46	7.48	7.80	8.06
% CHG SAME QTR LAST YR	8.57	5.57	2.75	0.59	1.42	2.72	4.43	4.81	5.08	5.24	5.34	1.00	4.29	3.34
STONE,CLAY AND GLASS	13.42	12.54	12.13	12.43	12.81	12.67	12.73	13.09	13.51	13.38	13.46	12.16	12.63	12.82
% CHG SAME QTR LAST YR	9.97	3.07	2.30	0.10	-4.58	1.01	4.95	5.25	5.47	5.60	5.68	5.27	3.85	1.52
PRIMARY METALS	11.51	11.52	11.83	11.93	11.87	11.96	12.36	12.50	12.47	12.59	13.01	11.50	11.70	12.17
% CHG SAME QTR LAST YR	0.79	0.09	2.41	3.53	3.08	3.88	4.47	4.75	5.11	5.26	5.28	-1.52	1.71	4.05
FABRICATED METALS	10.22	10.27	10.47	10.60	10.76	10.71	10.90	11.08	11.27	11.23	11.45	9.92	10.39	10.86
% CHG SAME QTR LAST YR	3.83	4.02	4.53	6.58	5.29	4.25	4.04	4.54	4.73	4.90	5.10	4.75	4.74	4.53
MACHINERY	9.36	9.46	9.46	9.60	9.66	9.79	9.86	10.04	10.13	10.26	10.36	9.25	9.47	9.84
% CHG SAME QTR LAST YR	1.41	2.79	2.99	2.61	3.19	3.46	4.15	4.53	4.80	4.86	5.07	1.94	2.45	3.84
INSTRUMENTS	9.58	9.69	9.82	9.80	10.06	10.13	10.24	10.26	10.56	10.64	10.78	9.38	9.72	10.17
% CHG SAME QTR LAST YR	2.10	3.08	4.37	5.20	4.99	4.48	4.34	4.69	4.95	5.10	5.19	4.57	3.68	4.62

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 14: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS.....	8.69	8.76	8.89	8.99	9.05	9.16	9.32	9.45	9.52	9.63	9.81	8.43	8.83	9.24
% CHG SAME QTR LAST YR.....	4.83	4.66	4.92	4.53	4.16	4.52	4.83	5.08	5.15	5.17	5.29	3.40	4.73	4.65
FOOD.....	8.62	8.67	8.66	8.80	8.91	8.98	9.04	9.20	9.32	9.42	9.48	8.47	8.69	9.03
% CHG SAME QTR LAST YR.....	2.74	2.20	2.02	3.11	3.36	3.54	4.28	4.59	4.66	4.86	4.94	0.88	2.52	3.94
TEXTILES.....	7.38	7.44	7.59	7.64	7.72	7.81	7.93	8.00	8.11	8.20	8.34	7.08	7.51	7.86
% CHG SAME QTR LAST YR.....	7.01	5.13	6.59	5.61	4.57	4.99	4.50	4.71	5.04	5.01	5.09	4.36	6.08	4.69
APPAREL.....	5.75	5.76	5.73	5.77	5.89	5.91	5.89	5.96	6.08	6.10	6.10	5.61	5.75	5.91
% CHG SAME QTR LAST YR.....	3.60	2.43	2.09	2.26	2.36	2.70	2.90	3.22	3.17	3.24	3.47	2.78	2.59	2.80
PAPER.....	11.64	11.53	11.57	11.76	11.99	12.11	12.12	12.35	12.62	12.76	12.79	11.16	11.62	12.14
% CHG SAME QTR LAST YR.....	2.37	4.09	5.29	4.87	3.03	4.98	4.81	5.05	5.26	5.38	5.47	3.21	4.14	4.47
CHEMICALS.....	11.77	11.85	11.99	12.09	12.12	12.32	12.57	12.71	12.76	12.98	13.26	11.44	11.92	12.43
% CHG SAME QTR LAST YR.....	5.66	4.68	4.60	2.18	2.98	3.93	4.85	5.08	5.28	5.39	5.47	3.86	4.25	4.22
RUBBER.....	10.65	10.95	11.15	11.43	11.37	11.50	11.66	11.98	11.93	12.09	12.26	10.18	11.05	11.63
% CHG SAME QTR LAST YR.....	7.03	9.50	9.32	8.11	6.75	5.02	4.56	4.78	4.89	5.09	5.18	5.56	8.49	5.26
LEATHER.....	6.45	6.45	6.51	6.48	6.73	6.79	6.78	6.76	7.03	7.10	7.10	6.10	6.47	6.76
% CHG SAME QTR LAST YR.....	5.22	5.91	7.50	5.57	4.37	5.16	4.15	4.33	4.50	4.58	4.65	-1.11	6.04	4.50

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 15: TENNESSEE PERSON-HOURS PER WEEK
SELECTED DURABLE GOODS MANUFACTURING
(THOUSANDS)

	HISTORY				FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS	10513	10595	10384	10683	10542	10681	10506	10828	10649	10828	10676	10589	10544	10639
% CHG SAME QTR LAST YR	-0.10	-0.85	-0.36	-0.38	0.28	0.81	1.18	1.36	1.01	1.38	1.62	3.30	-0.42	0.91
LUMBER AND WOOD	780	801	801	778	744	810	806	788	753	822	819	832	790	787
% CHG SAME QTR LAST YR	-3.69	-8.60	-3.83	-3.47	-4.63	1.15	0.66	1.29	1.23	1.43	1.60	-3.86	-4.96	-0.37
FURNITURE AND FIXTURES	1096	1124	1116	1203	1138	1162	1149	1230	1153	1164	1142	1046	1135	1170
% CHG SAME QTR LAST YR	11.54	10.53	8.38	4.08	3.81	3.32	2.97	2.25	1.30	0.20	-0.61	5.28	8.46	3.07
STONE,CLAY AND GLASS	654	667	669	673	625	663	659	673	630	667	664	680	666	655
% CHG SAME QTR LAST YR	1.13	-3.93	0.36	-5.18	-4.50	-0.60	-1.50	-0.06	0.77	0.62	0.68	-2.80	-2.00	-1.65
PRIMARY METALS	687	660	661	676	673	654	652	668	666	650	651	668	671	662
% CHG SAME QTR LAST YR	2.81	0.65	-0.03	-1.36	-2.06	-0.95	-1.38	-1.18	-1.02	-0.62	-0.10	-1.18	0.51	-1.40
FABRICATED METALS	1731	1714	1708	1732	1720	1720	1716	1752	1748	1754	1752	1759	1721	1727
% CHG SAME QTR LAST YR	-0.32	-2.99	-3.81	-1.52	-0.61	0.35	0.48	1.19	1.61	1.96	2.09	5.81	-2.17	0.35
MACHINERY	3156	3227	3128	3222	3213	3237	3110	3226	3243	3284	3172	3211	3183	3196
% CHG SAME QTR LAST YR	-3.16	-1.41	0.33	0.89	1.81	0.31	-0.59	0.15	0.92	1.47	2.01	4.66	-0.86	0.42
INSTRUMENTS	418	417	439	443	434	424	439	441	431	421	437	404	429	434
% CHG SAME QTR LAST YR	4.47	7.41	6.92	6.63	3.87	1.71	0.03	-0.56	-0.72	-0.67	-0.50	7.12	6.36	1.22

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 16: TENNESSEE PERSON-HOURS PER WEEK
SELECTED NONDURABLE GOODS MANUFACTURING
(THOUSANDS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS	10328	10380	10488	10556	10255	10303	10398	10441	10191	10277	10451	10544	10438	10349
% CHG SAME QTR LAST YR	-2.62	-1.07	-0.24	-0.09	-0.70	-0.74	-0.86	-1.09	-0.62	-0.25	0.51	1.09	-1.01	-0.85
FOOD	1594	1598	1639	1602	1565	1590	1635	1601	1566	1592	1638	1617	1608	1598
% CHG SAME QTR LAST YR	-0.48	-0.47	1.83	-2.88	-1.78	-0.53	-0.23	-0.09	0.05	0.12	0.17	2.19	-0.51	-0.66
TEXTILES	917	926	912	930	907	885	880	892	887	870	881	937	921	891
% CHG SAME QTR LAST YR	-8.31	-1.04	-0.10	3.20	-1.07	-4.41	-3.49	-4.06	-2.22	-1.71	0.11	-7.29	-1.73	-3.26
APPAREL	2364	2402	2356	2435	2305	2344	2300	2349	2237	2287	2276	2471	2389	2325
% CHG SAME QTR LAST YR	-6.06	-3.80	-2.57	-0.77	-2.47	-2.39	-2.37	-3.52	-2.96	-2.47	-1.04	-0.20	-3.32	-2.69
PAPER	878	905	953	927	888	920	956	938	903	939	976	891	916	926
% CHG SAME QTR LAST YR	2.55	3.14	3.66	1.86	1.13	1.67	0.34	1.11	1.61	2.03	2.07	5.36	2.80	1.05
CHEMICALS	1613	1649	1679	1656	1641	1634	1651	1629	1624	1632	1661	1614	1649	1639
% CHG SAME QTR LAST YR	0.12	3.70	2.65	2.29	1.74	-0.91	-1.68	-1.59	-1.05	-0.11	0.62	3.23	2.18	-0.63
RUBBER	1090	1076	1093	1139	1118	1107	1099	1139	1116	1109	1109	1088	1099	1116
% CHG SAME QTR LAST YR	-1.79	-2.40	4.47	3.90	2.62	2.92	0.57	0.03	-0.22	0.18	0.90	3.12	0.99	1.51
LEATHER	370	384	390	373	348	363	374	359	337	352	365	381	379	361
% CHG SAME QTR LAST YR	1.52	1.84	1.03	-6.00	-5.88	-5.55	-4.16	-3.76	-3.31	-2.90	-2.49	0.41	-0.48	-4.83

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 17: TENNESSEE PERSON-HOURS PER WEEK
SELECTED DURABLE GOODS MANUFACTURING
SEASONALLY ADJUSTED
(THOUSANDS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS	10589	10526	10525	10540	10611	10616	10650	10684	10718	10763	10822	10590	10545	10640
% CHG PREV QTR SAAR	0.27	-2.35	-0.04	0.57	2.70	0.22	1.25	1.30	1.28	1.68	2.21	3.32	-0.42	0.90
% CHG SAME QTR LAST YR	-0.23	-0.74	-0.33	-0.39	0.20	0.85	1.18	1.36	1.01	1.38	1.62	3.32	-0.42	0.90
LUMBER AND WOOD	824	777	782	781	785	786	787	791	794	798	800	832	791	787
% CHG PREV QTR SAAR	7.35	-20.85	2.86	-0.75	2.08	0.76	0.55	1.77	1.85	1.55	1.24	-3.32	-4.91	-0.44
% CHG SAME QTR LAST YR	-3.84	-8.45	-3.77	-3.49	-4.70	1.23	0.66	1.29	1.23	1.43	1.60	-3.82	-4.91	-0.44
FURNITURE AND FIXTURES	1115	1127	1142	1153	1158	1165	1176	1178	1173	1168	1169	1045	1134	1169
% CHG PREV QTR SAAR	2.65	4.48	5.16	3.83	1.88	2.60	3.59	0.96	-1.85	-1.82	0.31	5.23	8.53	3.10
% CHG SAME QTR LAST YR	11.59	10.61	8.34	4.02	3.83	3.36	2.97	2.25	1.30	0.20	-0.61	5.23	8.53	3.10
STONE,CLAY AND GLASS	684	658	666	657	653	654	656	657	658	659	660	679	666	655
% CHG PREV QTR SAAR	-5.85	-14.01	4.60	-4.88	-2.90	1.15	0.78	0.78	0.39	0.52	1.02	-2.87	-1.94	-1.70
% CHG SAME QTR LAST YR	1.06	-3.89	0.48	-5.26	-4.53	-0.58	-1.50	-0.06	0.77	0.62	0.68	-2.87	-1.94	-1.70
PRIMARY METALS	679	669	670	667	665	663	660	659	658	659	660	668	671	662
% CHG PREV QTR SAAR	1.65	-5.71	0.39	-1.63	-1.21	-1.27	-1.40	-0.84	-0.58	0.36	0.66	-1.17	0.50	-1.39
% CHG SAME QTR LAST YR	2.79	0.69	-0.08	-1.36	-2.07	-0.93	-1.38	-1.18	-1.02	-0.62	-0.10	-1.17	0.50	-1.39
FABRICATED METALS	1731	1716	1721	1717	1719	1723	1729	1737	1746	1756	1766	1760	1721	1727
% CHG PREV QTR SAAR	-2.57	-3.44	1.21	-0.94	0.35	0.96	1.57	1.86	2.05	2.36	2.08	5.80	-2.19	0.33
% CHG SAME QTR LAST YR	-0.54	-2.90	-3.80	-1.45	-0.72	0.39	0.48	1.19	1.61	1.96	2.09	5.80	-2.19	0.33
MACHINERY	3138	3179	3215	3202	3194	3191	3196	3207	3223	3237	3261	3211	3184	3197
% CHG PREV QTR SAAR	-4.54	5.25	4.72	-1.63	-1.06	-0.39	0.72	1.34	2.02	1.77	2.92	4.66	-0.84	0.42
% CHG SAME QTR LAST YR	-3.25	-1.29	0.35	0.86	1.77	0.38	-0.59	0.15	0.92	1.46	2.01	4.66	-0.84	0.42
INSTRUMENTS	420	427	434	436	436	435	434	433	433	432	432	403	429	435
% CHG PREV QTR SAAR	10.81	7.41	6.61	1.68	-0.14	-0.70	-0.70	-0.69	-0.80	-0.51	-0.01	7.12	6.38	1.26
% CHG SAME QTR LAST YR	4.40	7.66	6.88	6.58	3.84	1.82	0.03	-0.56	-0.72	-0.67	-0.50	7.12	6.38	1.26

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 18: TENNESSEE PERSON-HOURS PER WEEK
SELECTED NONDURABLE GOODS MANUFACTURING
SEASONALLY ADJUSTED
(THOUSANDS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS.....	10465	10444	10431	10418	10383	10375	10342	10305	10319	10349	10394	10546	10439	10351
% CHG PREV QTR SAAR.....	1.37	-0.80	-0.50	-0.50	-1.32	-0.33	-1.27	-1.41	0.55	1.15	1.78	1.11	-1.01	-0.85
% CHG SAME QTR LAST YR.....	-2.69	-0.95	-0.25	-0.11	-0.73	-0.66	-0.86	-1.08	-0.62	-0.25	0.51	1.11	-1.01	-0.85
FOOD.....	1629	1605	1602	1600	1598	1598	1598	1599	1599	1600	1600	1617	1609	1598
% CHG PREV QTR SAAR.....	-4.46	-5.71	-0.87	-0.38	-0.42	-0.11	-0.03	0.20	0.15	0.17	0.14	2.21	-0.52	-0.67
% CHG SAME QTR LAST YR.....	-0.66	-0.30	1.88	-2.88	-1.87	-0.45	-0.23	-0.09	0.05	0.12	0.17	2.21	-0.52	-0.67
TEXTILES.....	916	937	917	915	905	896	885	878	885	881	886	938	921	891
% CHG PREV QTR SAAR.....	13.99	9.46	-8.24	-0.84	-4.23	-3.94	-4.90	-3.17	3.35	-1.91	2.34	-7.28	-1.75	-3.28
% CHG SAME QTR LAST YR.....	-8.52	-0.91	-0.04	3.22	-1.18	-4.35	-3.49	-4.06	-2.22	-1.71	0.11	-7.28	-1.75	-3.28
APPAREL.....	2413	2396	2375	2375	2351	2341	2319	2291	2282	2283	2295	2472	2390	2325
% CHG PREV QTR SAAR.....	3.08	-2.76	-3.45	-0.01	-3.91	-1.83	-3.68	-4.65	-1.64	0.18	2.10	-0.14	-3.34	-2.69
% CHG SAME QTR LAST YR.....	-6.21	-3.64	-2.50	-0.82	-2.54	-2.31	-2.37	-3.52	-2.96	-2.47	-1.04	-0.14	-3.34	-2.69
PAPER.....	911	908	924	920	921	923	927	931	936	942	946	891	916	925
% CHG PREV QTR SAAR.....	3.19	-1.09	7.18	-1.57	0.16	1.20	1.61	1.51	2.15	2.88	1.74	5.42	2.80	1.06
% CHG SAME QTR LAST YR.....	2.51	3.17	3.67	1.87	1.11	1.69	0.34	1.11	1.61	2.03	2.07	5.42	2.80	1.06
CHEMICALS.....	1621	1656	1663	1657	1649	1641	1635	1630	1632	1640	1645	1614	1649	1639
% CHG PREV QTR SAAR.....	0.39	8.83	1.75	-1.50	-1.89	-1.80	-1.52	-1.15	0.31	1.96	1.37	3.23	2.19	-0.62
% CHG SAME QTR LAST YR.....	0.06	3.78	2.64	2.29	1.71	-0.87	-1.68	-1.59	-1.05	-0.11	0.62	3.23	2.19	-0.62
RUBBER.....	1089	1085	1110	1112	1118	1118	1116	1112	1116	1119	1127	1088	1099	1116
% CHG PREV QTR SAAR.....	7.10	-1.50	9.49	0.66	2.21	-0.19	-0.39	-1.49	1.19	1.41	2.55	3.16	0.99	1.54
% CHG SAME QTR LAST YR.....	-1.78	-2.29	4.44	3.84	2.63	2.97	0.57	0.03	-0.22	0.18	0.90	3.16	0.99	1.54
LEATHER.....	389	383	375	370	366	362	359	356	354	352	350	381	379	361
% CHG PREV QTR SAAR.....	-5.50	-5.28	-8.72	-4.73	-4.52	-3.91	-3.47	-3.13	-2.74	-2.24	-1.86	0.51	-0.45	-4.82
% CHG SAME QTR LAST YR.....	1.64	1.98	0.91	-6.07	-5.83	-5.49	-4.16	-3.76	-3.31	-2.90	-2.49	0.51	-0.45	-4.82

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 19: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS

	HISTORY				FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS.....	41.4	41.5	40.9	41.8	41.0	41.2	40.6	41.7	40.9	41.2	40.6	42.2	41.4	41.1
% CHG SAME QTR LAST YR.....	-2.13	-2.04	-1.52	-1.50	-0.86	-0.79	-0.62	-0.36	-0.20	-0.07	0.06	0.54	-1.80	-0.66
LUMBER AND WOOD.....	39.5	40.3	40.1	39.8	39.1	40.3	39.9	39.8	39.2	40.4	40.0	41.4	39.9	39.8
% CHG SAME QTR LAST YR.....	-1.25	-5.84	-4.43	-2.83	-0.98	-0.07	-0.53	0.04	0.09	0.17	0.23	1.91	-3.63	-0.38
FURNITURE AND FIXTURES.....	38.8	39.0	38.5	40.3	38.2	38.7	38.4	40.4	38.2	38.6	38.3	39.5	39.2	38.9
% CHG SAME QTR LAST YR.....	1.92	-0.09	-1.86	-2.95	-1.62	-0.78	-0.34	0.10	0.04	-0.30	-0.16	-1.66	-0.80	-0.65
STONE,CLAY AND GLASS.....	43.4	44.1	44.1	44.8	42.6	44.6	43.8	44.8	42.6	44.5	43.7	45.1	44.1	43.9
% CHG SAME QTR LAST YR.....	0.23	-3.50	-0.89	-4.67	-1.97	1.20	-0.56	-0.18	-0.05	-0.27	-0.22	-1.58	-2.27	-0.37
PRIMARY METALS.....	43.6	42.6	42.6	43.1	43.0	42.2	42.3	42.9	42.9	42.3	42.5	43.5	43.0	42.6
% CHG SAME QTR LAST YR.....	-0.23	-1.08	-1.77	-1.49	-1.41	-0.90	-0.85	-0.49	-0.22	0.15	0.47	1.07	-1.14	-0.92
FABRICATED METALS.....	41.5	41.4	41.3	41.7	41.3	41.4	41.0	41.5	41.1	41.3	41.0	41.9	41.5	41.3
% CHG SAME QTR LAST YR.....	-0.48	-1.82	-1.48	0.13	-0.40	-0.09	-0.75	-0.54	-0.40	-0.17	-0.06	0.54	-0.91	-0.44
MACHINERY.....	40.9	41.6	41.0	41.8	41.5	41.7	40.6	41.6	41.3	41.6	40.5	42.2	41.3	41.3
% CHG SAME QTR LAST YR.....	-6.04	-2.73	0.54	0.52	1.43	0.17	-0.93	-0.66	-0.44	-0.26	-0.09	-0.84	-1.99	0.00
INSTRUMENTS.....	41.8	41.3	42.0	42.2	41.8	41.1	41.8	42.0	41.7	41.0	41.7	42.0	41.8	41.7
% CHG SAME QTR LAST YR.....	-1.80	0.32	-0.30	0.61	0.12	-0.46	-0.67	-0.50	-0.37	-0.24	-0.13	3.88	-0.30	-0.38

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 20: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS.....	40.5	40.5	40.5	40.8	40.1	40.1	40.3	40.6	40.0	40.1	40.3	41.0	40.6	40.3
% CHG SAME QTR LAST YR.....	-1.94	-0.98	-0.88	-0.57	-1.00	-0.90	-0.53	-0.45	-0.29	-0.12	0.06	-0.47	-1.09	-0.72
FOOD.....	40.8	40.5	40.4	40.3	40.0	40.2	40.1	40.1	39.9	40.1	40.1	40.9	40.5	40.1
% CHG SAME QTR LAST YR.....	-1.84	-1.06	0.37	-1.84	-2.05	-0.79	-0.55	-0.42	-0.32	-0.25	-0.19	0.08	-1.10	-0.96
TEXTILES.....	41.6	41.8	41.3	41.7	41.0	40.0	40.5	41.0	40.6	40.0	40.6	40.7	41.6	40.6
% CHG SAME QTR LAST YR.....	0.00	5.37	1.28	2.55	-1.36	-4.38	-2.10	-1.86	-1.01	-0.07	0.31	-3.44	2.27	-2.43
APPAREL.....	37.5	38.2	37.7	38.2	37.0	37.7	37.4	37.9	36.8	37.6	37.4	38.1	37.9	37.5
% CHG SAME QTR LAST YR.....	-0.79	-0.69	-0.36	-0.35	-1.21	-1.20	-0.77	-0.79	-0.57	-0.24	0.04	-0.50	-0.55	-0.99
PAPER.....	45.2	45.5	46.5	46.5	45.6	45.3	46.0	46.1	45.3	45.1	45.9	45.6	45.9	45.7
% CHG SAME QTR LAST YR.....	-0.44	1.41	0.96	0.50	0.88	-0.41	-1.11	-0.90	-0.66	-0.44	-0.23	1.90	0.61	-0.39
CHEMICALS.....	42.0	42.2	42.7	42.6	42.3	42.1	42.5	42.4	42.2	42.1	42.5	42.3	42.4	42.3
% CHG SAME QTR LAST YR.....	-1.79	0.16	1.08	0.79	0.79	-0.17	-0.47	-0.36	-0.26	-0.16	-0.08	1.34	0.05	-0.05
RUBBER.....	43.1	41.7	41.6	43.3	43.0	42.0	41.5	43.2	42.9	42.0	41.5	43.5	42.4	42.4
% CHG SAME QTR LAST YR.....	-5.42	-5.30	1.36	0.12	-0.24	0.66	-0.37	-0.31	-0.21	-0.06	0.09	-1.51	-2.41	-0.07
LEATHER.....	39.2	40.6	40.3	39.7	38.4	39.7	39.9	39.3	38.1	39.6	39.8	40.0	39.9	39.3
% CHG SAME QTR LAST YR.....	0.08	1.84	-2.03	-0.56	-2.20	-2.15	-0.99	-0.82	-0.59	-0.37	-0.15	-2.28	-0.18	-1.54

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 21: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED

	HISTORY		FORECAST - DATA										ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103		1988	1989	1990
TOTAL DURABLE GOODS	41.5	41.5	41.4	41.3	41.2	41.1	41.1	41.1	41.1	41.1	41.1		42.2	41.4	41.1
% CHG PREV QTR SAAR	-3.18	-0.83	-0.92	-1.06	-0.77	-0.32	-0.33	-0.02	-0.13	0.18	0.21		0.54	-1.80	-0.66
% CHG SAME QTR LAST YR	-2.19	-1.99	-1.52	-1.50	-0.89	-0.77	-0.62	-0.36	-0.20	-0.07	0.06		0.54	-1.80	-0.66
LUMBER AND WOOD	40.2	39.8	40.0	39.8	39.8	39.8	39.8	39.8	39.9	39.9	39.9		41.4	40.0	39.8
% CHG PREV QTR SAAR	-6.95	-4.03	1.77	-1.86	0.22	-0.31	-0.18	0.44	0.40	0.02	0.04		1.88	-3.61	-0.39
% CHG SAME QTR LAST YR	-1.29	-5.81	-4.41	-2.82	-1.00	-0.05	-0.53	0.04	0.09	0.17	0.23		1.88	-3.61	-0.39
FURNITURE AND FIXTURES	39.5	39.2	39.0	38.9	38.9	39.0	38.9	38.9	38.9	38.8	38.8		39.5	39.2	38.9
% CHG PREV QTR SAAR	-5.56	-2.90	-2.15	-1.38	0.04	0.53	-0.53	0.39	-0.22	-0.81	0.00		-1.68	-0.76	-0.65
% CHG SAME QTR LAST YR	1.97	-0.01	-1.89	-3.01	-1.60	-0.75	-0.34	0.10	0.04	-0.30	-0.16		-1.68	-0.76	-0.65
STONE,CLAY AND GLASS	44.8	43.4	44.2	44.0	43.9	44.0	44.0	43.9	43.9	43.9	43.9		45.1	44.1	43.9
% CHG PREV QTR SAAR	-11.69	-11.45	7.31	-1.95	-0.92	0.66	-0.02	-0.44	-0.39	-0.22	0.15		-1.62	-2.22	-0.39
% CHG SAME QTR LAST YR	0.21	-3.48	-0.77	-4.76	-1.98	1.21	-0.56	-0.18	-0.05	-0.27	-0.22		-1.62	-2.22	-0.39
PRIMARY METALS	43.3	43.0	42.9	42.8	42.7	42.6	42.5	42.5	42.6	42.6	42.7		43.5	43.0	42.6
% CHG PREV QTR SAAR	-1.07	-2.96	-0.74	-1.21	-0.78	-0.85	-0.58	0.26	0.30	0.62	0.70		1.08	-1.15	-0.92
% CHG SAME QTR LAST YR	-0.25	-1.07	-1.80	-1.50	-1.42	-0.89	-0.85	-0.49	-0.22	0.15	0.47		1.08	-1.15	-0.92
FABRICATED METALS	41.6	41.3	41.6	41.4	41.4	41.3	41.3	41.2	41.2	41.2	41.2		41.9	41.5	41.3
% CHG PREV QTR SAAR	1.85	-2.16	2.33	-1.27	-0.55	-0.78	-0.41	-0.41	0.00	0.12	0.06		0.53	-0.93	-0.45
% CHG SAME QTR LAST YR	-0.53	-1.79	-1.53	0.17	-0.43	-0.08	-0.75	-0.54	-0.40	-0.17	-0.06		0.53	-0.93	-0.45
MACHINERY	40.9	41.3	41.7	41.5	41.4	41.4	41.3	41.3	41.3	41.3	41.3		42.2	41.3	41.3
% CHG PREV QTR SAAR	-4.40	4.18	3.98	-1.38	-1.03	-0.76	-0.56	-0.28	-0.18	-0.01	0.12		-0.85	-1.98	-0.01
% CHG SAME QTR LAST YR	-6.10	-2.71	0.57	0.53	1.40	0.18	-0.93	-0.66	-0.44	-0.26	-0.09		-0.85	-1.98	-0.01
INSTRUMENTS	41.7	41.9	41.9	41.8	41.8	41.7	41.7	41.6	41.6	41.6	41.6		42.0	41.8	41.7
% CHG PREV QTR SAAR	1.41	1.40	0.62	-0.98	-0.71	-0.56	-0.44	-0.28	-0.19	-0.07	0.01		3.88	-0.29	-0.38
% CHG SAME QTR LAST YR	-1.89	0.42	-0.28	0.61	0.08	-0.41	-0.67	-0.50	-0.37	-0.24	-0.13		3.88	-0.29	-0.38

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 22: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS.....	40.8	40.7	40.5	40.4	40.3	40.3	40.3	40.2	40.2	40.3	40.3	41.0	40.6	40.3
% CHG PREV QTR SAAR.....	1.15	-1.08	-1.74	-0.63	-0.72	-0.33	-0.46	-0.28	-0.08	0.34	0.27	-0.46	-1.09	-0.72
% CHG SAME QTR LAST YR.....	-2.02	-0.88	-0.87	-0.58	-1.04	-0.85	-0.53	-0.45	-0.29	-0.12	0.06	-0.46	-1.09	-0.72
FOOD.....	41.0	40.4	40.3	40.2	40.2	40.1	40.1	40.1	40.0	40.0	40.0	40.9	40.5	40.1
% CHG PREV QTR SAAR.....	0.56	-5.96	-1.03	-0.79	-0.60	-0.46	-0.35	-0.27	-0.20	-0.16	-0.12	0.08	-1.10	-0.96
% CHG SAME QTR LAST YR.....	-1.98	-0.93	0.40	-1.84	-2.12	-0.72	-0.55	-0.42	-0.32	-0.25	-0.19	0.08	-1.10	-0.96
TEXTILES.....	41.5	42.4	41.3	41.2	40.9	40.6	40.5	40.5	40.5	40.6	40.6	40.7	41.6	40.6
% CHG PREV QTR SAAR.....	13.89	8.86	-9.76	-1.01	-2.98	-3.31	-1.08	-0.04	0.43	0.44	0.44	-3.45	2.27	-2.44
% CHG SAME QTR LAST YR.....	-0.17	5.50	1.28	2.59	-1.44	-4.32	-2.10	-1.86	-1.01	-0.07	0.31	-3.45	2.27	-2.44
APPAREL.....	38.1	38.0	37.7	37.7	37.6	37.5	37.5	37.4	37.4	37.4	37.5	38.1	37.9	37.5
% CHG PREV QTR SAAR.....	2.80	-1.50	-2.33	-0.35	-0.87	-1.07	-0.79	-0.42	-0.01	0.28	0.32	-0.51	-0.55	-1.00
% CHG SAME QTR LAST YR.....	-0.91	-0.60	-0.31	-0.36	-1.26	-1.16	-0.77	-0.79	-0.57	-0.24	0.04	-0.51	-0.55	-1.00
PAPER.....	45.5	46.0	46.2	46.0	45.9	45.8	45.7	45.6	45.6	45.6	45.6	45.6	45.9	45.7
% CHG PREV QTR SAAR.....	-2.98	4.24	2.18	-1.40	-1.35	-0.96	-0.73	-0.57	-0.38	-0.09	0.10	1.92	0.61	-0.38
% CHG SAME QTR LAST YR.....	-0.42	1.44	0.97	0.47	0.89	-0.39	-1.11	-0.90	-0.66	-0.44	-0.23	1.92	0.61	-0.38
CHEMICALS.....	42.1	42.4	42.5	42.5	42.4	42.4	42.3	42.3	42.3	42.3	42.3	42.4	42.4	42.4
% CHG PREV QTR SAAR.....	-0.39	3.18	1.10	-0.62	-0.57	-0.39	-0.28	-0.22	-0.14	-0.01	0.06	1.35	0.05	-0.05
% CHG SAME QTR LAST YR.....	-1.86	0.25	1.05	0.80	0.76	-0.12	-0.47	-0.36	-0.26	-0.16	-0.08	1.35	0.05	-0.05
RUBBER AND PLASTICS.....	42.6	42.1	42.5	42.5	42.5	42.4	42.4	42.4	42.4	42.4	42.4	43.5	42.4	42.4
% CHG PREV QTR SAAR.....	0.93	-4.13	4.05	-0.34	-0.41	-0.41	-0.32	-0.08	-0.01	0.19	0.27	-1.51	-2.39	-0.06
% CHG SAME QTR LAST YR.....	-5.45	-5.22	1.37	0.08	-0.25	0.70	-0.37	-0.31	-0.21	-0.06	0.09	-1.51	-2.39	-0.06
LEATHER.....	40.3	40.2	39.7	39.6	39.4	39.4	39.3	39.2	39.2	39.2	39.2	40.0	39.9	39.3
% CHG PREV QTR SAAR.....	5.29	-1.20	-5.04	-1.19	-1.25	-0.86	-0.65	-0.51	-0.32	0.01	0.22	-2.25	-0.16	-1.53
% CHG SAME QTR LAST YR.....	0.12	1.94	-2.06	-0.60	-2.18	-2.10	-0.99	-0.82	-0.59	-0.37	-0.15	-2.25	-0.16	-1.53

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 23: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS.....	311.9	308.5	303.0	313.1	305.7	305.7	303.3	314.5	307.3	307.6	304.9	320.2	309.1	307.3
% CHG SAME QTR LAST YR.....	-4.22	-4.01	-3.09	-2.50	-1.96	-0.88	0.12	0.44	0.51	0.60	0.53	-2.54	-3.46	-0.58
LUMBER AND WOOD.....	195.3	194.3	194.5	191.9	187.5	194.2	193.0	192.1	188.0	194.7	193.1	210.4	194.0	191.7
% CHG SAME QTR LAST YR.....	-3.40	-11.06	-9.30	-7.16	-3.98	-0.08	-0.79	0.14	0.23	0.28	0.08	1.14	-7.82	-1.18
FURNITURE AND FIXTURES.....	237.0	237.4	225.7	237.9	225.7	231.6	225.1	239.2	227.1	232.2	225.5	237.4	234.5	230.4
% CHG SAME QTR LAST YR.....	5.90	0.69	-3.78	-6.87	-4.76	-2.41	-0.28	0.57	0.60	0.26	0.16	-4.46	-1.22	-1.74
STONE,CLAY AND GLASS.....	455.4	425.7	407.9	420.4	406.6	416.7	407.8	423.4	410.2	419.4	409.6	440.9	427.3	413.6
% CHG SAME QTR LAST YR.....	5.49	-5.06	-3.24	-8.96	-10.71	-2.11	-0.01	0.71	0.88	0.63	0.42	-0.34	-3.07	-3.21
PRIMARY METALS.....	392.2	378.0	384.7	387.6	380.4	372.6	381.7	387.3	381.8	375.3	384.5	401.6	385.6	380.5
% CHG SAME QTR LAST YR.....	-3.76	-5.50	-4.00	-2.71	-3.00	-1.43	-0.76	-0.07	0.36	0.73	0.73	-4.21	-3.99	-1.32
FABRICATED METALS.....	331.0	327.6	330.1	333.6	331.3	326.7	326.6	332.5	330.7	326.9	326.7	333.6	330.5	329.3
% CHG SAME QTR LAST YR.....	-1.11	-2.52	-1.72	1.82	0.10	-0.26	-1.06	-0.32	-0.18	0.06	0.04	1.29	-0.90	-0.38
MACHINERY.....	299.4	303.4	295.7	303.0	299.2	301.1	292.3	301.6	298.7	300.9	292.2	313.4	300.4	298.6
% CHG SAME QTR LAST YR.....	-8.82	-4.56	-1.19	-1.60	-0.09	-0.76	-1.14	-0.46	-0.15	-0.06	-0.02	-2.73	-4.14	-0.61
INSTRUMENTS.....	312.7	308.4	314.8	312.1	313.8	307.2	312.6	311.7	314.0	307.7	312.8	316.1	312.0	311.3
% CHG SAME QTR LAST YR.....	-4.05	-1.28	-0.70	0.98	0.34	-0.41	-0.70	-0.14	0.06	0.18	0.05	4.52	-1.30	-0.23

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 24: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS.....	275.2	273.1	274.7	276.6	270.9	270.9	274.5	277.4	271.8	271.8	275.4	277.9	274.9	273.4
% CHG SAME QTR LAST YR.....	-1.62	-1.08	-0.76	-0.84	-1.57	-0.82	-0.09	0.28	0.34	0.37	0.34	-0.99	-1.08	-0.55
FOOD.....	274.9	270.6	266.7	267.2	265.6	266.2	265.0	266.8	265.2	266.1	264.3	278.7	269.8	265.9
% CHG SAME QTR LAST YR.....	-3.48	-3.48	-2.28	-3.44	-3.37	-1.63	-0.64	-0.16	-0.17	-0.05	-0.25	-2.86	-3.18	-1.46
TEXTILES.....	239.7	239.8	239.3	240.4	236.0	230.5	234.6	236.8	234.8	231.1	235.5	231.4	239.8	234.5
% CHG SAME QTR LAST YR.....	2.41	5.75	3.01	3.33	-1.54	-3.87	-1.98	-1.49	-0.50	0.27	0.40	-3.07	3.61	-2.22
APPAREL.....	168.6	169.3	164.5	166.2	162.7	164.5	161.0	163.2	159.7	161.9	158.7	171.5	167.1	162.8
% CHG SAME QTR LAST YR.....	-1.64	-2.90	-2.93	-2.78	-3.47	-2.84	-2.16	-1.83	-1.84	-1.58	-1.41	-1.62	-2.56	-2.58
PAPER.....	411.0	404.0	410.1	412.5	407.8	404.5	407.3	411.7	408.1	405.5	408.1	409.2	409.4	407.8
% CHG SAME QTR LAST YR.....	-2.46	0.76	1.44	0.54	-0.78	0.12	-0.69	-0.21	0.06	0.24	0.22	1.19	0.05	-0.39
CHEMICALS.....	385.8	385.3	390.6	388.5	382.2	382.8	390.6	389.9	384.1	384.8	392.1	389.0	387.5	386.4
% CHG SAME QTR LAST YR.....	-0.70	0.08	0.89	-1.74	-0.93	-0.65	0.00	0.36	0.49	0.53	0.38	1.24	-0.38	-0.30
RUBBER.....	358.4	351.8	354.1	373.6	364.4	356.1	353.4	374.1	365.0	357.4	354.3	355.5	359.5	362.0
% CHG SAME QTR LAST YR.....	-3.12	-1.02	5.74	3.27	1.66	1.23	-0.19	0.14	0.17	0.36	0.27	0.02	1.12	0.70
LEATHER.....	197.7	201.9	200.0	193.8	192.6	198.9	197.6	192.3	191.5	198.0	196.6	196.2	198.3	195.3
% CHG SAME QTR LAST YR.....	0.78	2.95	0.50	0.15	-2.57	-1.46	-1.20	-0.81	-0.59	-0.44	-0.48	-7.06	1.10	-1.51

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 25: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORY				FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS	312.8	309.5	307.3	306.8	306.6	306.9	307.7	308.1	308.1	308.7	309.3	320.2	309.1	307.3
% CHG PREV QTR SAAR	-2.42	-4.04	-2.85	-0.73	-0.24	0.40	1.05	0.55	0.05	0.76	0.75	-2.52	-3.47	-0.58
% CHG SAME QTR LAST YR	-4.24	-3.97	-3.09	-2.52	-1.98	-0.86	0.12	0.44	0.51	0.60	0.53	-2.52	-3.47	-0.58
LUMBER AND WOOD	199.6	191.5	193.3	191.8	191.6	191.4	191.8	192.1	192.0	192.0	191.9	210.4	194.0	191.7
% CHG PREV QTR SAAR	-12.87	-15.19	3.73	-3.02	-0.47	-0.31	0.69	0.65	-0.12	-0.10	-0.09	1.11	-7.78	-1.20
% CHG SAME QTR LAST YR	-3.46	-11.01	-9.30	-7.15	-4.01	-0.05	-0.79	0.14	0.23	0.28	0.08	1.11	-7.78	-1.20
FURNITURE AND FIXTURES	241.1	235.9	231.2	229.9	229.6	230.1	230.6	231.2	231.0	230.7	231.0	237.3	234.5	230.4
% CHG PREV QTR SAAR	-9.02	-8.26	-7.71	-2.36	-0.38	0.89	0.76	1.03	-0.28	-0.45	0.37	-4.56	-1.17	-1.76
% CHG SAME QTR LAST YR	5.97	0.62	-3.80	-6.87	-4.74	-2.44	-0.28	0.57	0.60	0.26	0.16	-4.56	-1.17	-1.76
STONE,CLAY AND GLASS	461.1	422.0	414.8	412.4	411.5	413.0	414.7	415.3	415.1	415.6	416.5	440.9	427.5	413.6
% CHG PREV QTR SAAR	7.08	-29.85	-6.66	-2.30	-0.82	1.47	1.67	0.54	-0.14	0.45	0.83	-0.38	-3.02	-3.25
% CHG SAME QTR LAST YR	5.39	-5.08	-3.11	-9.02	-10.75	-2.12	-0.01	0.71	0.88	0.63	0.42	-0.38	-3.02	-3.25
PRIMARY METALS	392.0	385.1	383.5	381.6	380.3	379.7	380.6	381.3	381.7	382.5	383.4	401.6	385.5	380.5
% CHG PREV QTR SAAR	-0.16	-6.91	-1.62	-1.98	-1.32	-0.62	0.91	0.76	0.41	0.84	0.93	-4.19	-4.01	-1.31
% CHG SAME QTR LAST YR	-3.73	-5.42	-4.14	-2.70	-2.98	-1.38	-0.76	-0.07	0.36	0.73	0.73	-4.19	-4.01	-1.31
FABRICATED METALS	329.1	329.8	332.7	330.4	329.5	328.8	329.2	329.3	328.9	329.0	329.3	333.6	330.5	329.2
% CHG PREV QTR SAAR	6.09	0.79	3.56	-2.76	-1.05	-0.86	0.45	0.18	-0.47	0.08	0.37	1.31	-0.93	-0.40
% CHG SAME QTR LAST YR	-1.10	-2.60	-1.79	1.87	0.11	-0.30	-1.06	-0.32	-0.18	0.06	0.04	1.31	-0.93	-0.40
MACHINERY	299.0	300.6	302.1	300.0	298.6	298.4	298.6	298.6	298.2	298.2	298.6	313.3	300.4	298.6
% CHG PREV QTR SAAR	-7.55	2.18	1.98	-2.72	-1.80	-0.36	0.36	0.00	-0.60	0.00	0.52	-2.73	-4.13	-0.61
% CHG SAME QTR LAST YR	-8.86	-4.52	-1.16	-1.61	-0.12	-0.74	-1.14	-0.46	-0.15	-0.06	-0.02	-2.73	-4.13	-0.61
INSTRUMENTS	310.0	312.2	313.7	312.2	311.1	310.9	311.5	311.8	311.3	311.4	311.7	316.1	312.0	311.3
% CHG PREV QTR SAAR	1.18	2.77	2.01	-1.89	-1.49	-0.21	0.82	0.33	-0.68	0.25	0.32	4.53	-1.30	-0.23
% CHG SAME QTR LAST YR	-4.07	-1.28	-0.72	1.00	0.33	-0.41	-0.70	-0.14	0.06	0.18	0.05	4.53	-1.30	-0.23

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 26: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORY				FORECAST - DATA							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS	277.4	275.3	273.8	273.2	273.0	273.1	273.6	273.9	273.9	274.1	274.5	277.9	274.9	273.4
% CHG PREV QTR SAAR	2.73	-2.97	-2.08	-0.95	-0.34	0.18	0.76	0.52	-0.10	0.29	0.65	-0.99	-1.08	-0.56
% CHG SAME QTR LAST YR	-1.67	-1.03	-0.76	-0.84	-1.59	-0.80	-0.09	0.28	0.34	0.37	0.34	-0.99	-1.08	-0.56
FOOD	275.6	269.8	267.7	266.6	266.0	265.6	266.0	266.2	265.6	265.5	265.4	278.8	269.9	266.0
% CHG PREV QTR SAAR	-0.81	-8.15	-3.00	-1.65	-0.84	-0.69	0.64	0.25	-0.88	-0.20	-0.15	-2.87	-3.17	-1.47
% CHG SAME QTR LAST YR	-3.65	-3.32	-2.24	-3.45	-3.45	-1.55	-0.64	-0.16	-0.17	-0.05	-0.25	-2.87	-3.17	-1.47
TEXTILES	239.6	243.4	238.7	237.7	235.7	234.1	234.0	234.2	234.5	234.7	234.9	231.5	239.8	234.5
% CHG PREV QTR SAAR	17.88	6.46	-7.50	-1.59	-3.36	-2.73	-0.21	0.38	0.58	0.32	0.33	-3.08	3.61	-2.24
% CHG SAME QTR LAST YR	2.23	5.86	2.99	3.39	-1.62	-3.82	-1.98	-1.49	-0.50	0.27	0.40	-3.08	3.61	-2.24
APPAREL	170.1	167.9	165.8	164.9	164.1	163.1	162.3	161.9	161.1	160.5	160.0	171.6	167.2	162.8
% CHG PREV QTR SAAR	1.07	-5.15	-4.73	-2.22	-1.91	-2.42	-2.10	-0.89	-1.93	-1.41	-1.40	-1.64	-2.56	-2.59
% CHG SAME QTR LAST YR	-1.72	-2.87	-2.88	-2.79	-3.51	-2.82	-2.16	-1.83	-1.84	-1.58	-1.41	-1.64	-2.56	-2.59
PAPER	411.0	406.9	410.8	409.1	407.8	407.3	407.9	408.3	408.0	408.3	408.8	409.3	409.4	407.8
% CHG PREV QTR SAAR	4.16	-4.00	3.91	-1.59	-1.33	-0.44	0.61	0.33	-0.23	0.28	0.50	1.19	0.05	-0.40
% CHG SAME QTR LAST YR	-2.48	0.75	1.46	0.56	-0.79	0.11	-0.69	-0.21	0.06	0.24	0.22	1.19	0.05	-0.40
CHEMICALS	389.1	388.3	386.8	386.0	385.4	385.8	386.8	387.4	387.3	387.9	388.3	389.0	387.6	386.4
% CHG PREV QTR SAAR	-3.63	-0.78	-1.57	-0.83	-0.58	0.42	1.00	0.62	-0.06	0.58	0.37	1.25	-0.38	-0.31
% CHG SAME QTR LAST YR	-0.73	0.09	0.87	-1.71	-0.94	-0.64	0.00	0.36	0.49	0.53	0.38	1.25	-0.38	-0.31
RUBBER	355.7	356.9	362.8	362.2	361.7	361.3	362.1	362.7	362.3	362.6	363.1	355.4	359.4	361.9
% CHG PREV QTR SAAR	5.68	1.36	6.75	-0.66	-0.53	-0.40	0.84	0.63	-0.39	0.37	0.47	0.01	1.13	0.71
% CHG SAME QTR LAST YR	-3.07	-1.00	5.70	3.24	1.68	1.24	-0.19	0.14	0.17	0.36	0.27	0.01	1.13	0.71
LEATHER	200.9	198.1	197.7	196.7	195.8	195.3	195.3	195.1	194.7	194.5	194.4	196.2	198.4	195.4
% CHG PREV QTR SAAR	9.34	-5.40	-0.96	-1.93	-1.82	-1.00	-0.03	-0.37	-0.95	-0.41	-0.20	-7.01	1.10	-1.50
% CHG SAME QTR LAST YR	0.84	3.03	0.45	0.12	-2.54	-1.43	-1.20	-0.81	-0.59	-0.44	-0.48	-7.01	1.10	-1.50

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 27: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL DURABLE GOODS.....	399.2	400.4	397.2	415.2	410.0	414.4	415.0	435.0	430.6	436.3	438.0	398.6	403.0	418.6
% CHG SAME QTR LAST YR.....	0.08	0.56	1.56	2.19	2.71	3.51	4.49	4.78	5.03	5.29	5.55	1.30	1.10	3.88
LUMBER AND WOOD.....	250.0	252.2	255.0	254.4	251.5	263.2	264.0	265.8	263.4	276.2	277.4	262.0	252.9	261.1
% CHG SAME QTR LAST YR.....	0.93	-6.83	-4.95	-2.69	0.60	4.35	3.55	4.46	4.74	4.95	5.09	5.13	-3.48	3.25
FURNITURE AND FIXTURES.....	303.4	308.1	295.9	315.4	302.7	314.0	308.0	330.9	318.2	329.5	323.9	295.7	305.7	313.9
% CHG SAME QTR LAST YR.....	10.66	5.48	0.83	-2.39	-0.23	1.91	4.08	4.92	5.12	4.93	5.17	-0.58	3.38	2.68
STONE,CLAY AND GLASS.....	582.9	552.6	534.7	557.4	545.2	564.9	558.0	585.6	574.8	594.9	588.4	549.0	556.9	563.4
% CHG SAME QTR LAST YR.....	10.22	-0.54	1.39	-4.58	-6.46	2.23	4.36	5.06	5.42	5.31	5.44	3.62	1.44	1.17
PRIMARY METALS.....	502.0	490.6	504.3	513.9	510.1	505.0	522.3	535.7	535.0	532.4	552.4	500.0	502.7	518.3
% CHG SAME QTR LAST YR.....	0.56	-1.00	0.60	1.98	1.62	2.94	3.58	4.24	4.88	5.42	5.77	-0.46	0.54	3.10
FABRICATED METALS.....	423.7	425.2	432.7	442.3	444.3	442.9	446.8	459.9	463.5	463.8	469.4	415.2	431.0	448.5
% CHG SAME QTR LAST YR.....	3.33	2.13	2.99	6.72	4.87	4.16	3.26	3.98	4.31	4.72	5.04	5.29	3.79	4.06
MACHINERY.....	383.3	393.9	387.6	401.8	401.2	408.2	399.9	417.2	418.6	426.9	419.8	390.0	391.6	406.6
% CHG SAME QTR LAST YR.....	-4.72	-0.01	3.54	3.14	4.66	3.64	3.18	3.84	4.34	4.59	4.98	1.07	0.41	3.83
INSTRUMENTS.....	400.3	400.3	412.7	413.8	420.7	416.4	427.8	431.1	440.0	436.5	449.4	393.5	406.8	424.0
% CHG SAME QTR LAST YR.....	0.26	3.42	4.05	5.84	5.12	4.00	3.64	4.17	4.56	4.84	5.05	8.62	3.38	4.23

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 28: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONDURABLE GOODS.....	352.2	354.5	360.1	366.8	363.2	367.1	375.5	383.7	380.8	385.6	395.6	346.0	358.4	372.4
% CHG SAME QTR LAST YR.....	2.80	3.63	4.00	3.93	3.12	3.57	4.27	4.61	4.85	5.04	5.35	2.92	3.59	3.90
FOOD.....	351.8	351.3	349.6	354.3	356.2	360.8	362.6	369.0	371.6	377.5	379.8	346.9	351.8	362.1
% CHG SAME QTR LAST YR.....	0.85	1.12	2.40	1.21	1.23	2.72	3.70	4.15	4.32	4.61	4.74	0.97	1.39	2.95
TEXTILES.....	306.8	311.2	313.7	318.7	316.4	312.5	321.0	327.5	329.0	327.9	338.4	288.1	312.6	319.3
% CHG SAME QTR LAST YR.....	7.01	10.78	7.95	8.30	3.15	0.39	2.30	2.76	3.97	4.94	5.42	0.75	8.50	2.15
APPAREL.....	215.7	219.7	215.7	220.4	218.2	222.9	220.3	225.7	223.8	229.6	228.0	213.6	217.9	221.8
% CHG SAME QTR LAST YR.....	2.78	1.72	1.72	1.90	1.13	1.47	2.11	2.41	2.58	3.00	3.52	2.27	2.03	1.78
PAPER.....	526.1	524.4	537.6	547.0	546.9	548.3	557.2	569.4	571.8	575.2	586.3	509.4	533.8	555.4
% CHG SAME QTR LAST YR.....	1.92	5.56	6.30	5.39	3.94	4.55	3.65	4.10	4.56	4.91	5.23	5.17	4.78	4.06
CHEMICALS.....	493.8	500.1	512.1	515.1	512.5	518.8	534.5	539.3	538.2	545.9	563.3	484.3	505.3	526.3
% CHG SAME QTR LAST YR.....	3.76	4.85	5.72	2.99	3.79	3.75	4.37	4.70	5.01	5.22	5.39	5.22	4.32	4.16
RUBBER.....	458.8	456.6	464.2	495.3	488.6	482.7	483.5	517.4	511.5	507.0	509.1	442.5	468.7	493.1
% CHG SAME QTR LAST YR.....	1.23	3.70	10.81	8.24	6.50	5.72	4.17	4.46	4.68	5.04	5.28	3.93	5.92	5.19
LEATHER.....	253.1	262.0	262.2	257.0	258.3	269.6	270.3	266.0	268.3	280.9	282.5	244.2	258.6	266.0
% CHG SAME QTR LAST YR.....	5.31	7.86	5.31	4.97	2.07	2.90	3.12	3.48	3.88	4.19	4.49	-3.38	5.86	2.90

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 29: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
(1982 DOLLARS)

	HISTORY	FORECAST - DATA										ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL NONAGRICULTURAL	16437	15982	15991	15892	16246	15996	16047	15988	16395	16168	16220	15916	16076	16069
% CHG SAME QTR LAST YR	4.04	1.62	-0.06	-1.51	-1.16	0.08	0.35	0.60	0.91	1.08	1.08	1.04	1.01	-0.04
MINING	20738	19729	19886	19541	20828	19987	20138	19808	21086	20226	20334	20419	19974	20190
% CHG SAME QTR LAST YR	-2.94	-1.46	-3.02	-1.22	0.43	1.31	1.26	1.36	1.24	1.19	0.98	2.08	-2.18	1.08
CONSTRUCTION	19518	17850	17051	17480	19100	17627	16915	17415	19180	17856	17247	17444	17974	17764
% CHG SAME QTR LAST YR	9.14	3.97	-0.63	-0.47	-2.14	-1.25	-0.80	-0.37	0.42	1.30	1.96	3.75	3.04	-1.17
MANUFACTURING	17772	17601	17489	17450	17553	17456	17492	17515	17695	17652	17717	17460	17578	17504
% CHG SAME QTR LAST YR	2.75	2.07	-0.97	-1.08	-1.23	-0.82	0.02	0.37	0.81	1.13	1.29	0.58	0.67	-0.42
DURABLE GOODS	18633	18351	18331	18272	18293	18178	18330	18330	18458	18420	18624	18415	18397	18283
% CHG SAME QTR LAST YR	1.95	1.53	-1.30	-2.49	-1.82	-0.94	0.00	0.32	0.90	1.33	1.60	0.74	-0.10	-0.62
NONDURABLE GOODS	16913	16854	16662	16639	16809	16727	16651	16691	16916	16865	16799	16527	16767	16720
% CHG SAME QTR LAST YR	3.47	2.59	-0.64	0.44	-0.61	-0.75	-0.07	0.31	0.64	0.83	0.89	0.35	1.45	-0.28
TRADE	12849	12359	12275	12123	12640	12392	12323	12194	12771	12568	12528	12287	12401	12387
% CHG SAME QTR LAST YR	4.86	0.81	-0.24	-1.67	-1.63	0.27	0.39	0.58	1.04	1.42	1.66	1.76	0.93	-0.11
SERVICES	15930	15282	15220	15547	15880	15487	15430	15782	16153	15741	15647	15191	15495	15645
% CHG SAME QTR LAST YR	7.92	4.17	0.72	-4.17	-0.31	1.35	1.38	1.51	1.71	1.64	1.40	1.94	2.00	0.97
FIN,INS,REAL EST	18796	18138	18140	18332	18525	18287	18324	18564	18815	18576	18581	18149	18352	18425
% CHG SAME QTR LAST YR	5.35	-0.83	0.84	-0.78	-1.45	0.82	1.01	1.27	1.57	1.58	1.40	-3.41	1.12	0.40
TRANS,COMM,PUB UTIL	22825	21964	21805	21831	22310	22099	21975	22055	22530	22320	22157	21667	22106	22110
% CHG SAME QTR LAST YR	5.86	1.19	1.10	-0.01	-2.26	0.62	0.78	1.02	0.99	1.00	0.83	0.60	2.03	0.02
GOVERNMENT	16529	16527	17295	16346	16420	16473	17238	16326	16421	16471	17203	16742	16674	16614
% CHG SAME QTR LAST YR	-1.67	-0.61	0.25	0.42	-0.66	-0.33	-0.33	-0.13	0.00	-0.01	-0.21	0.85	-0.40	-0.36
FEDERAL,CIVILIAN	24300	23952	24368	24398	23911	23799	24174	24182	23722	23640	23984	24145	24255	24016
% CHG SAME QTR LAST YR	0.87	-0.42	0.60	0.77	-1.60	-0.64	-0.80	-0.89	-0.79	-0.67	-0.79	0.74	0.45	-0.98
STATE AND LOCAL	14756	14817	15598	14591	14764	14830	15635	14645	14812	14875	15643	14949	14941	14969
% CHG SAME QTR LAST YR	-1.53	0.27	0.53	0.49	0.05	0.09	0.24	0.37	0.33	0.30	0.05	1.07	-0.06	0.19

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 30: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
SEASONALLY ADJUSTED 1982 DOLLARS

	HISTORY	FORECAST - DATA										ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	16207	16033	16034	16017	16023	16045	16090	16113	16169	16219	16267	15915	16073	16068
% CHG PREV QTR SAAR	-1.39	-4.22	0.02	-0.41	0.15	0.54	1.13	0.57	1.38	1.25	1.19	1.05	0.99	-0.03
% CHG SAME QTR LAST YR	4.06	1.61	-0.07	-1.51	-1.13	0.08	0.35	0.60	0.91	1.08	1.10	1.05	0.99	-0.03
MINING	19977	19876	19971	20020	20074	20134	20223	20293	20323	20374	20421	20402	19961	20181
% CHG PREV QTR SAAR	-5.64	-1.99	1.92	0.99	1.07	1.20	1.80	1.38	0.59	1.00	0.93	2.05	-2.16	1.10
% CHG SAME QTR LAST YR	-2.84	-1.50	-3.07	-1.23	0.49	1.29	1.26	1.36	1.24	1.19	0.98	2.05	-2.16	1.10
CONSTRUCTION	18115	17942	17870	17792	17741	17715	17727	17726	17814	17945	18075	17428	17930	17727
% CHG PREV QTR SAAR	5.39	-3.75	-1.61	-1.73	-1.14	-0.59	0.28	-0.02	2.01	2.96	2.94	3.96	2.88	-1.13
% CHG SAME QTR LAST YR	9.31	3.93	-0.71	-0.48	-2.06	-1.27	-0.80	-0.37	0.42	1.30	1.96	3.96	2.88	-1.13
MANUFACTURING	17679	17629	17517	17479	17469	17480	17519	17543	17610	17677	17745	17459	17576	17503
% CHG PREV QTR SAAR	0.23	-1.14	-2.50	-0.86	-0.24	0.25	0.91	0.54	1.55	1.53	1.54	0.59	0.67	-0.42
% CHG SAME QTR LAST YR	2.77	2.03	-0.97	-1.07	-1.19	-0.84	0.01	0.36	0.81	1.13	1.29	0.59	0.67	-0.42
DURABLE GOODS	18577	18436	18302	18263	18247	18259	18301	18320	18411	18503	18594	18413	18394	18281
% CHG PREV QTR SAAR	-3.19	-2.99	-2.89	-0.84	-0.36	0.26	0.93	0.41	2.02	2.00	1.99	0.74	-0.10	-0.61
% CHG SAME QTR LAST YR	2.02	1.47	-1.31	-2.48	-1.78	-0.96	0.00	0.31	0.90	1.34	1.60	0.74	-0.10	-0.61
NONDURABLE GOODS	16788	16830	16743	16703	16690	16699	16731	16754	16796	16837	16880	16528	16766	16718
% CHG PREV QTR SAAR	3.94	1.00	-2.06	-0.96	-0.29	0.20	0.78	0.56	1.01	0.98	1.02	0.36	1.44	-0.28
% CHG SAME QTR LAST YR	3.45	2.57	-0.62	0.46	-0.58	-0.78	-0.07	0.31	0.63	0.83	0.89	0.36	1.44	-0.28
TRADE	12556	12334	12352	12347	12353	12367	12400	12419	12481	12543	12606	12287	12397	12385
% CHG PREV QTR SAAR	0.01	-6.91	0.59	-0.15	0.19	0.46	1.08	0.61	2.01	1.99	2.03	1.79	0.90	-0.10
% CHG SAME QTR LAST YR	4.87	0.81	-0.26	-1.66	-1.62	0.27	0.39	0.58	1.04	1.42	1.66	1.79	0.90	-0.10
SERVICES	15596	15397	15466	15503	15549	15603	15680	15737	15815	15859	15900	15191	15491	15642
% CHG PREV QTR SAAR	-13.60	-5.00	1.81	0.94	1.20	1.41	1.97	1.47	2.00	1.11	1.04	1.98	1.97	0.98
% CHG SAME QTR LAST YR	7.93	4.16	0.72	-4.17	-0.30	1.34	1.38	1.51	1.71	1.64	1.40	1.98	1.97	0.98
FIN,INS,REAL EST	18598	18231	18277	18293	18329	18380	18462	18525	18617	18670	18721	18150	18350	18424
% CHG PREV QTR SAAR	3.57	-7.65	1.02	0.34	0.79	1.13	1.79	1.36	2.00	1.16	1.09	-3.40	1.10	0.41
% CHG SAME QTR LAST YR	5.35	-0.83	0.83	-0.77	-1.44	0.82	1.01	1.27	1.57	1.58	1.40	-3.40	1.10	0.41
TRANS,COMM,PUB UTIL	22515	21930	21977	21984	22015	22062	22148	22209	22233	22283	22332	21665	22101	22109
% CHG PREV QTR SAAR	9.82	-9.99	0.86	0.12	0.57	0.86	1.57	1.09	0.43	0.90	0.88	0.61	2.02	0.03
% CHG SAME QTR LAST YR	5.94	1.16	1.12	-0.05	-2.22	0.60	0.78	1.02	0.99	1.00	0.83	0.61	2.02	0.03
GOVERNMENT	16706	16659	16685	16621	16597	16604	16627	16601	16597	16601	16592	16736	16668	16607
% CHG PREV QTR SAAR	3.82	-1.13	0.64	-1.55	-0.57	0.18	0.57	-0.63	-0.10	0.10	-0.22	0.85	-0.41	-0.36
% CHG SAME QTR LAST YR	-1.66	-0.62	0.25	0.42	-0.66	-0.33	-0.35	-0.12	0.00	-0.02	-0.21	0.85	-0.41	-0.36
FEDERAL,CIVILIAN	24467	24218	24225	24097	24084	24064	24032	23882	23894	23903	23843	24141	24252	24016
% CHG PREV QTR SAAR	9.60	-3.99	0.12	-2.11	-0.21	-0.33	-0.52	-2.47	0.19	0.16	-1.00	0.76	0.46	-0.97
% CHG SAME QTR LAST YR	0.94	-0.42	0.54	0.77	-1.56	-0.64	-0.80	-0.89	-0.79	-0.67	-0.79	0.76	0.46	-0.97
STATE AND LOCAL	14928	14924	14943	14932	14934	14937	14978	14987	14983	14983	14986	14941	14932	14959
% CHG PREV QTR SAAR	1.86	-0.09	0.49	-0.28	0.05	0.09	1.10	0.25	-0.12	-0.01	0.08	1.06	-0.06	0.18
% CHG SAME QTR LAST YR	-1.55	0.27	0.57	0.49	0.04	0.09	0.24	0.37	0.33	0.30	0.05	1.06	-0.06	0.18

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 31: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
SEASONALLY ADJUSTED CURRENT DOLLARS

	HISTORY	FORECAST - DATA										ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	20745	20811	21020	21238	21487	21749	22015	22288	22657	23008	23370	19819	20953	21885
% CHG PREV QTR SAAR	3.38	1.28	4.07	4.22	4.77	4.98	4.98	5.04	6.79	6.35	6.43	5.06	5.73	4.45
% CHG SAME QTR LAST YR	8.73	6.45	4.72	3.23	3.58	4.51	4.74	4.94	5.45	5.79	6.15	5.06	5.73	4.45
MINING	25570	25800	26181	26545	26918	27291	27670	28069	28478	28902	29337	25400	26024	27487
% CHG PREV QTR SAAR	-1.09	3.64	6.05	5.68	5.73	5.66	5.67	5.89	5.96	6.09	6.15	6.05	2.46	5.62
% CHG SAME QTR LAST YR	1.53	3.19	1.58	3.53	5.27	5.78	5.69	5.74	5.80	5.90	6.02	6.05	2.46	5.62
CONSTRUCTION	23187	23289	23427	23591	23790	24012	24255	24519	24963	25457	25968	21706	23373	24144
% CHG PREV QTR SAAR	10.48	1.78	2.38	2.83	3.42	3.80	4.10	4.42	7.45	8.15	8.27	8.09	7.68	3.30
% CHG SAME QTR LAST YR	14.22	8.87	4.05	4.31	2.60	3.11	3.53	3.93	4.93	6.02	7.06	8.09	7.68	3.30
MANUFACTURING	22629	22882	22965	23176	23425	23694	23970	24265	24677	25077	25493	21740	22913	23839
% CHG PREV QTR SAAR	5.07	4.54	1.45	3.74	4.36	4.67	4.75	5.01	6.97	6.65	6.80	4.58	5.40	4.04
% CHG SAME QTR LAST YR	7.39	6.89	3.78	3.69	3.52	3.55	4.38	4.70	5.35	5.84	6.35	4.58	5.40	4.04
DURABLE GOODS	23778	23930	23993	24215	24468	24750	25040	25340	25799	26248	26712	22927	23979	24899
% CHG PREV QTR SAAR	1.49	2.59	1.04	3.77	4.24	4.69	4.77	4.88	7.46	7.14	7.27	4.74	4.59	3.84
% CHG SAME QTR LAST YR	6.60	6.31	3.42	2.22	2.90	3.42	4.36	4.64	5.44	6.05	6.68	4.74	4.59	3.84
NONDURABLE GOODS	21489	21845	21949	22146	22381	22635	22892	23174	23536	23885	24250	20580	21857	22770
% CHG PREV QTR SAAR	8.96	6.81	1.91	3.64	4.30	4.62	4.61	5.03	6.39	6.07	6.25	4.34	6.21	4.18
% CHG SAME QTR LAST YR	8.10	7.45	4.14	5.30	4.15	3.61	4.29	4.64	5.16	5.52	5.93	4.34	6.21	4.18
TRADE	16072	16009	16192	16371	16565	16763	16966	17178	17489	17793	18110	15300	16161	16868
% CHG PREV QTR SAAR	4.84	-1.56	4.66	4.49	4.81	4.89	4.93	5.08	7.45	7.13	7.31	5.83	5.63	4.37
% CHG SAME QTR LAST YR	9.58	5.61	4.52	3.07	3.06	4.71	4.78	4.93	5.58	6.14	6.74	5.83	5.63	4.37
SERVICES	19963	19985	20276	20555	20850	21150	21454	21768	22162	22498	22842	18923	20195	21305
% CHG PREV QTR SAAR	-9.43	0.45	5.94	5.63	5.86	5.88	5.86	5.98	7.44	6.20	6.27	6.03	6.72	5.50
% CHG SAME QTR LAST YR	12.78	9.12	5.55	0.45	4.45	5.83	5.81	5.90	6.29	6.37	6.47	6.03	6.72	5.50
FIN,INS,REAL EST	23805	23664	23961	24255	24579	24915	25261	25624	26087	26486	26895	22600	23921	25094
% CHG PREV QTR SAAR	8.57	-2.35	5.11	5.00	5.44	5.58	5.67	5.87	7.44	6.25	6.32	0.41	5.85	4.90
% CHG SAME QTR LAST YR	10.08	3.89	5.67	4.01	3.25	5.29	5.42	5.64	6.14	6.31	6.47	0.41	5.85	4.90
TRANS,COMM,PUB UTIL	28819	28466	28811	29149	29521	29906	30304	30719	31154	31611	32082	26976	28811	30112
% CHG PREV QTR SAAR	15.12	-4.82	4.95	4.77	5.21	5.31	5.44	5.59	5.79	5.99	6.10	4.59	6.80	4.52
% CHG SAME QTR LAST YR	10.70	5.98	5.97	4.77	2.44	5.06	5.18	5.39	5.53	5.70	5.87	4.59	6.80	4.52
GOVERNMENT	21384	21623	21874	22038	22256	22507	22750	22963	23257	23551	23837	20834	21730	22619
% CHG PREV QTR SAAR	8.84	4.55	4.72	3.02	4.01	4.59	4.40	3.79	5.23	5.15	4.95	4.82	4.30	4.09
% CHG SAME QTR LAST YR	2.75	4.11	5.06	5.26	4.08	4.09	4.00	4.20	4.50	4.64	4.78	4.82	4.30	4.09
FEDERAL,CIVILIAN	31317	31436	31759	31950	32296	32619	32882	33034	33482	33909	34254	30054	31615	32708
% CHG PREV QTR SAAR	14.89	1.52	4.18	2.44	4.39	4.06	3.26	1.87	5.53	5.20	4.13	4.73	5.20	3.45
% CHG SAME QTR LAST YR	5.48	4.32	5.36	5.62	3.12	3.76	3.54	3.39	3.67	3.96	4.17	4.73	5.20	3.45
STATE AND LOCAL	19107	19372	19589	19799	20026	20248	20493	20731	20995	21254	21529	18600	19467	20374
% CHG PREV QTR SAAR	6.77	5.65	4.57	4.35	4.67	4.50	4.95	4.71	5.21	5.03	5.26	5.04	4.66	4.66
% CHG SAVE QTR LAST YR	2.87	5.05	5.39	5.33	4.81	4.52	4.62	4.71	4.84	4.97	5.05	5.04	4.66	4.66

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 32: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
(CURRENT DOLLARS)

	HISTORY	FORECAST - DATA										ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	21040	20745	20964	21072	21786	21682	21955	22114	22974	22937	23302	19817	20955	21884
% CHG SAME QTR LAST YR	8.71	6.46	4.73	3.24	3.55	4.52	4.73	4.95	5.45	5.79	6.14	5.05	5.74	4.43
MINING	26545	25608	26070	25911	27929	27093	27553	27398	29548	28692	29213	25415	26033	27493
% CHG SAME QTR LAST YR	1.42	3.23	1.63	3.54	5.22	5.80	5.69	5.74	5.80	5.90	6.02	6.09	2.43	5.61
CONSTRUCTION	24983	23169	22353	23177	25613	23893	23143	24088	26876	25330	24777	21716	23420	24184
% CHG SAME QTR LAST YR	14.04	8.92	4.13	4.32	2.52	3.13	3.53	3.93	4.93	6.02	7.06	7.89	7.85	3.26
MANUFACTURING	22748	22846	22927	23138	23538	23661	23933	24227	24796	25042	25453	21741	22915	23840
% CHG SAME QTR LAST YR	7.36	6.93	3.78	3.68	3.48	3.57	4.39	4.71	5.34	5.83	6.35	4.57	5.40	4.04
DURABLE GOODS	23850	23820	24031	24227	24531	24640	25080	25354	25865	26131	26756	22930	23982	24901
% CHG SAME QTR LAST YR	6.53	6.37	3.43	2.21	2.86	3.45	4.36	4.65	5.44	6.05	6.68	4.74	4.59	3.83
NONDURABLE GOODS	21648	21877	21844	22062	22540	22674	22782	23087	23704	23926	24133	20578	21858	22771
% CHG SAME QTR LAST YR	8.12	7.47	4.12	5.28	4.12	3.64	4.30	4.65	5.16	5.52	5.93	4.33	6.22	4.18
TRADE	16446	16042	16092	16074	16949	16798	16861	16866	17895	17830	17998	15297	16164	16869
% CHG SAME QTR LAST YR	9.57	5.61	4.54	3.07	3.06	4.71	4.78	4.93	5.58	6.14	6.74	5.80	5.66	4.36
SERVICES	20390	19836	19953	20614	21295	20993	21112	21830	22634	22331	22479	18921	20198	21307
% CHG SAME QTR LAST YR	12.76	9.13	5.55	0.45	4.44	5.84	5.81	5.90	6.29	6.37	6.47	6.00	6.75	5.49
FIN,INS,REAL EST	24059	23544	23781	24306	24841	24789	25072	25578	26366	26352	26693	22598	23923	25095
% CHG SAME QTR LAST YR	10.08	3.89	5.67	4.00	3.25	5.29	5.42	5.64	6.14	6.31	6.47	0.41	5.86	4.90
TRANS,COMM,PUB UTIL	29216	28510	28585	28947	29917	29956	30067	30506	31572	31664	31831	26976	28814	30111
% CHG SAME QTR LAST YR	10.62	6.00	5.95	4.81	2.40	5.07	5.18	5.39	5.53	5.70	5.87	4.57	6.81	4.50
GOVERNMENT	21157	21452	22673	21674	22019	22329	23586	22582	23010	23366	24714	20842	21739	22629
% CHG SAME QTR LAST YR	2.75	4.12	5.06	5.26	4.08	4.09	4.03	4.19	4.50	4.64	4.78	4.81	4.30	4.09
FEDERAL,CIVILIAN	31104	31090	31946	32350	32063	32260	33075	33448	33241	33537	34456	30061	31623	32712
% CHG SAME QTR LAST YR	5.39	4.32	5.42	5.62	3.08	3.76	3.54	3.39	3.67	3.96	4.17	4.71	5.19	3.44
STATE AND LOCAL	18888	19232	20449	19347	19798	20102	21393	20257	20756	21102	22473	18610	19479	20387
% CHG SAME QTR LAST YR	2.90	5.05	5.35	5.33	4.82	4.52	4.62	4.71	4.84	4.97	5.05	5.04	4.67	4.66

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 33: TENNESSEE CIVILIAN LABOR FORCE AND UMEMPLOYMENT RATE

	HISTORY				FORECAST - [illegible]							ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	19[illegible]	199101	199102	199103	1988	1989	1990
CIVILIAN LABOR FORCE (THOUS)....	2350	2356	2358	2367	2342	2389	2423	2394	2370	2420	2460	2350	2358	2387
% CHG SAME QTR LAST YR.....	1.30	-0.22	-0.83	1.09	-0.35	1.37	2.77	1.15	1.21	1.34	1.49	0.60	0.33	1.24
EMPLOYED PERSONS (THOUS).....	2208	2228	2243	2255	2203	2248	2284	2274	2232	2282	2326	2214	2233	2253
% CHG SAME QTR LAST YR.....	0.98	0.48	0.36	1.69	-0.20	0.92	1.84	0.85	1.33	1.51	1.82	1.47	0.88	0.86
UNEMPLOYED PERSONS (THOUS).....	142	129	115	112	138	140	139	120	137	138	134	136	124	134
% CHG SAME QTR LAST YR.....	6.66	-10.94	-19.48	-9.62	-2.66	9.21	20.83	7.15	-0.72	-1.37	-3.82	-11.69	-8.57	8.04
PARTICIPATION RATE (THOUS).....	0.611	0.611	0.610	0.610	0.601	0.612	0.619	0.609	0.601	0.612	0.620	0.616	0.610	0.610
% CHG SAME QTR LAST YR.....	0.05	-1.47	-2.08	-0.18	-1.60	0.09	1.48	-0.12	-0.06	0.06	0.21	-0.63	-0.93	-0.04
UNEMPLOYMENT RATE (PERCENT).....	6.1	5.5	4.9	4.7	5.9	5.9	5.7	5.0	5.8	5.7	5.4	5.8	5.3	5.6

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 34: TENNESSEE CIVILIAN LABOR FORCE AND UNEMPLOYMENT RATE
SEASONALLY ADJUSTED

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
CIVILIAN LABOR FORCE (THOUS)....	2385	2352	2327	2368	2376	2384	2391	2396	2405	2416	2427	2350	2358	2387
% CHG PREV QTR SAAR.....	7.22	-5.51	-4.10	7.26	1.38	1.23	1.28	0.84	1.52	1.75	1.89	0.63	0.33	1.22
% CHG SAME QTR LAST YR.....	1.24	-0.17	-0.80	1.04	-0.37	1.36	2.76	1.18	1.22	1.35	1.50	0.63	0.33	1.22
EMPLOYED PERSONS (THOUS).....	2248	2228	2215	2244	2243	2249	2256	2263	2272	2283	2297	2214	2234	2253
% CHG PREV QTR SAAR.....	7.73	-3.44	-2.32	5.29	-0.23	1.14	1.26	1.25	1.68	1.84	2.49	1.47	0.88	0.85
% CHG SAME QTR LAST YR.....	0.92	0.51	0.38	1.70	-0.23	0.93	1.84	0.85	1.33	1.51	1.82	1.47	0.88	0.85
UNEMPLOYED PERSONS (THOUS).....	137	123	112	124	134	135	135	133	133	133	130	136	124	134
% CHG PREV QTR SAAR.....	-0.71	-34.76	-32.33	52.12	33.96	2.84	1.71	-5.91	-1.27	0.17	-8.06	-11.33	-8.63	8.03
% CHG SAME QTR LAST YR.....	6.75	-11.07	-19.43	-9.64	-2.61	9.13	20.83	7.15	-0.72	-1.37	-3.82	-11.33	-8.63	8.03
PARTICIPATION RATE.....	0.620	0.610	0.602	0.610	0.610	0.610	0.610	0.610	0.610	0.611	0.612	0.616	0.611	0.610
% CHG PREV QTR SAAR.....	5.88	-6.69	-5.31	5.91	0.10	-0.04	0.01	-0.43	0.24	0.46	0.60	-0.60	-0.93	-0.05
% CHG SAME QTR LAST YR.....	-0.02	-1.42	-2.04	-0.23	-1.62	0.09	1.46	-0.09	-0.06	0.07	0.22	-0.60	-0.93	-0.05
UNEMPLOYMENT RATE (PERCENT).....	5.8	5.3	4.8	5.3	5.6	5.7	5.7	5.6	5.5	5.5	5.4	5.8	5.3	5.6

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 35: TENNESSEE TAXABLE SALES
(MILLIONS OF CURRENT DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	8773	10196	10443	10828	9138	10776	10992	11445	9725	11490	11775	38538	40240	42351
% CHG SAME QTR LAST YR	4.7	2.8	5.2	5.0	4.1	5.7	5.3	5.7	6.4	6.6	7.1	5.9	4.4	5.2
AUTO DEALERS	1076	1190	1265	1040	1089	1263	1364	1135	1187	1369	1476	4536	4571	4851
% CHG SAME QTR LAST YR	-1.2	-4.9	5.3	4.6	1.2	6.2	7.8	9.2	9.1	8.4	8.2	4.9	0.8	6.1
PURCHASES FROM MANUFACTURERS	653	748	799	762	693	784	817	801	732	830	870	2757	2962	3094
% CHG SAME QTR LAST YR	5.4	6.2	13.6	4.4	6.1	4.8	2.2	5.2	5.6	6.0	6.6	8.3	7.4	4.5
MISC DURABLE GOODS	1357	1698	1705	1635	1370	1767	1751	1691	1437	1863	1864	6335	6394	6579
% CHG SAME QTR LAST YR	1.7	-1.8	1.5	2.6	0.9	4.1	2.7	3.5	4.9	5.4	6.5	2.8	0.9	2.9
EATING AND DRINKING PLACES	698	806	834	790	725	859	890	845	781	928	966	2942	3128	3320
% CHG SAME QTR LAST YR	9.9	6.3	4.2	5.6	3.9	6.6	6.8	6.9	7.6	8.0	8.5	7.1	6.3	6.1
FOOD STORES	1343	1516	1518	1463	1364	1539	1561	1515	1420	1604	1631	5695	5840	5979
% CHG SAME QTR LAST YR	3.0	2.4	2.0	2.8	1.5	1.5	2.9	3.5	4.1	4.2	4.5	3.3	2.6	2.4
LIQUOR STORES	57	59	60	78	58	60	59	78	58	60	59	251	254	255
% CHG SAME QTR LAST YR	-2.6	0.4	3.0	2.0	1.2	1.9	-0.2	-0.7	1.1	-0.3	-0.1	-0.5	0.8	0.4
HOTELS AND MOTELS	171	257	292	230	187	280	315	251	205	310	350	883	951	1033
% CHG SAME QTR LAST YR	3.7	8.7	10.5	6.0	9.1	8.9	7.7	9.1	10.0	10.5	11.4	9.9	7.6	8.6
OTHER RETAIL AND SERVICE	2227	2590	2597	3253	2350	2765	2753	3453	2510	2962	2963	10095	10666	11321
% CHG SAME QTR LAST YR	7.5	4.5	4.2	6.5	5.5	6.8	6.0	6.2	6.8	7.1	7.6	7.0	5.7	6.1
MISC NONDURABLE GOODS	779	869	887	1056	806	921	937	1114	855	978	999	3378	3591	3778
% CHG SAME QTR LAST YR	7.6	6.5	6.8	4.9	3.5	6.0	5.6	5.4	6.0	6.2	6.7	7.2	6.3	5.2
TRANSPORTATION,COMMUNICATION	413	463	486	520	497	537	546	562	540	586	596	1665	1883	2142
% CHG SAME QTR LAST YR	9.4	13.4	18.5	10.8	20.3	15.9	12.2	8.1	8.8	9.1	9.1	14.0	13.0	13.8

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 36: TENNESSEE TAXABLE SALES
SEASONALLY ADJUSTED
(MILLIONS OF CURRENT DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	9944	9937	10111	10223	10356	10506	10643	10809	11021	11202	11399	38508	40216	42314
% CHG PREV QTR SAAR	8.4	-0.3	7.2	4.5	5.3	5.9	5.3	6.4	8.1	6.7	7.2	6.0	4.4	5.2
% CHG SAME QTR LAST YR	4.8	2.9	5.2	4.9	4.1	5.7	5.3	5.7	6.4	6.6	7.1	6.0	4.4	5.2
AUTO DEALERS	1162	1132	1134	1148	1177	1201	1223	1253	1284	1302	1323	4540	4576	4854
% CHG PREV QTR SAAR	26.5	-9.9	0.4	5.2	10.5	8.4	7.5	10.4	10.1	5.8	6.7	5.3	0.8	6.1
% CHG SAME QTR LAST YR	-1.1	-5.1	5.4	4.7	1.3	6.0	7.9	9.2	9.1	8.4	8.2	5.3	0.8	6.1
PURCHASES FROM MANUFACTURERS	715	734	760	750	759	768	777	789	802	814	829	2757	2960	3094
% CHG PREV QTR SAAR	-1.6	10.9	14.9	-5.0	4.5	5.2	4.7	6.2	6.5	6.5	7.1	8.4	7.3	4.5
% CHG SAME QTR LAST YR	5.4	6.0	13.7	4.5	6.1	4.7	2.3	5.2	5.6	6.0	6.6	8.4	7.3	4.5
MISC DURABLE GOODS	1605	1569	1606	1617	1619	1635	1648	1673	1698	1723	1755	6333	6397	6575
% CHG PREV QTR SAAR	7.8	-8.6	9.7	2.7	0.6	4.0	3.3	6.0	6.2	6.1	7.5	2.9	1.0	2.8
% CHG SAME QTR LAST YR	1.6	-1.6	1.5	2.6	0.9	4.2	2.6	3.5	4.9	5.4	6.5	2.9	1.0	2.8
EATING AND DRINKING PLACES	778	772	783	795	809	823	836	850	870	888	907	2938	3128	3317
% CHG PREV QTR SAAR	13.5	-3.1	6.0	6.5	6.8	7.2	6.5	7.0	9.9	8.5	8.8	7.1	6.4	6.1
% CHG SAME QTR LAST YR	9.9	6.4	4.1	5.6	4.0	6.6	6.8	6.9	7.6	8.0	8.5	7.1	6.4	6.1
FOOD STORES	1451	1467	1459	1462	1474	1488	1501	1514	1535	1551	1568	5692	5839	5978
% CHG PREV QTR SAAR	8.1	4.5	-2.3	1.1	3.3	3.9	3.4	3.4	5.7	4.1	4.6	3.3	2.6	2.4
% CHG SAME QTR LAST YR	3.2	2.3	2.1	2.7	1.6	1.5	2.9	3.5	4.1	4.2	4.5	3.3	2.6	2.4
LIQUOR STORES	63	63	64	64	64	64	64	63	64	64	64	251	253	255
% CHG PREV QTR SAAR	0.1	1.2	6.0	0.1	-2.1	4.3	-2.5	-2.4	5.4	-1.7	-1.5	-0.3	0.7	0.6
% CHG SAME QTR LAST YR	-2.6	0.6	3.2	1.8	1.2	2.0	-0.1	-0.7	1.1	-0.3	-0.1	-0.3	0.7	0.6
HOTELS AND MOTELS	229	234	241	244	249	255	260	267	274	282	290	885	949	1031
% CHG PREV QTR SAAR	-3.7	10.0	13.2	5.1	8.0	9.6	8.4	10.3	11.6	11.7	11.8	10.3	7.2	8.7
% CHG SAME QTR LAST YR	3.5	8.6	10.7	6.0	9.0	8.9	7.7	9.1	10.0	10.5	11.4	10.3	7.2	8.7
OTHER RETAIL AND SERVICE	2615	2626	2684	2720	2761	2805	2845	2888	2949	3004	3061	10075	10646	11298
% CHG PREV QTR SAAR	9.7	1.6	9.2	5.5	6.1	6.5	5.8	6.2	8.8	7.6	7.8	7.2	5.7	6.1
% CHG SAME QTR LAST YR	7.5	4.6	4.1	6.5	5.6	6.8	6.0	6.2	6.8	7.1	7.6	7.2	5.7	6.1
MISC NONDURABLE GOODS	893	883	899	912	924	937	949	962	980	996	1012	3371	3588	3772
% CHG PREV QTR SAAR	10.7	-4.6	7.5	6.1	5.4	5.7	5.1	5.5	7.7	6.7	6.9	7.3	6.4	5.1
% CHG SAME QTR LAST YR	7.5	6.7	6.8	7.7	3.5	6.1	5.6	5.4	6.0	6.2	6.7	7.3	6.4	5.1
TRANSPORTATION,COMMUNICATION	432	457	482	509	520	530	541	551	566	578	590	1664	1881	2141
% CHG PREV QTR SAAR	-21.7	25.0	22.9	25.2	8.5	8.1	8.4	7.4	11.3	9.3	8.5	13.9	13.0	13.9
% CHG SAME QTR LAST YR	9.2	13.5	18.7	10.8	20.2	15.9	12.3	8.1	8.8	9.1	9.1	13.9	13.0	13.9

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 37: TENNESSEE TAXABLE SALES
(MILLIONS OF 1982 DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	6854	7855	7966	8166	6814	7950	8034	8274	6940	8099	8196	30933	30842	31072
% CHG SAME QTR LAST YR	0.2	-1.9	0.4	0.2	-0.6	1.2	0.9	1.3	1.8	1.9	2.0	1.9	-0.3	0.7
AUTO DEALERS	840	917	965	785	812	932	997	821	847	965	1027	3645	3506	3561
% CHG SAME QTR LAST YR	-5.5	-9.2	0.5	-0.2	-3.4	1.7	3.3	4.6	4.4	3.6	3.1	1.1	-3.8	1.6
PURCHASES FROM MANUFACTURERS	510	576	609	575	517	578	597	579	522	585	606	2214	2270	2271
% CHG SAME QTR LAST YR	0.9	1.3	8.4	-0.4	1.3	0.3	-2.1	0.8	1.1	1.3	1.5	4.2	2.6	0.0
MISC DURABLE GOODS	1060	1308	1300	1233	1022	1304	1279	1223	1025	1313	1297	5086	4902	4828
% CHG SAME QTR LAST YR	-2.7	-6.2	-3.1	-2.1	-3.7	-0.3	-1.6	-0.8	0.4	0.7	1.4	-1.0	-3.6	-1.5
EATING AND DRINKING PLACES	545	621	636	596	541	634	651	611	557	654	673	2362	2398	2436
% CHG SAME QTR LAST YR	5.2	1.5	-0.6	0.8	-0.8	2.1	2.3	2.5	3.0	3.2	3.4	3.1	1.6	1.6
FOOD STORES	1049	1168	1158	1103	1017	1136	1141	1095	1013	1130	1135	4573	4479	4389
% CHG SAME QTR LAST YR	-1.4	-2.2	-2.6	-1.9	-3.1	-2.8	-1.4	-0.8	-0.4	-0.5	-0.5	-0.6	-2.1	-2.0
LIQUOR STORES	44	45	45	59	43	44	43	56	42	42	41	202	194	187
% CHG SAME QTR LAST YR	-6.8	-4.1	-1.7	-2.7	-3.4	-2.4	-4.4	-4.8	-3.2	-4.8	-4.8	-4.2	-3.8	-3.8
HOTELS AND MOTELS	134	198	223	174	139	207	230	181	147	218	244	709	728	757
% CHG SAME QTR LAST YR	-0.8	3.7	5.4	1.2	4.1	4.3	3.1	4.6	5.3	5.6	6.1	5.7	2.8	4.0
OTHER RETAIL AND SERVICE	1739	1996	1981	2453	1753	2040	2012	2496	1792	2088	2062	8097	8169	8301
% CHG SAME QTR LAST YR	2.8	-0.2	-0.5	1.6	0.7	2.2	1.6	1.8	2.2	2.3	2.5	3.0	0.9	1.6
MISC NONDURABLE GOODS	609	669	677	797	601	679	685	805	610	690	696	2710	2751	2770
% CHG SAME QTR LAST YR	3.0	1.6	1.9	0.0	-1.2	1.5	1.2	1.0	1.4	1.5	1.6	3.2	1.5	0.7
TRANSPORTATION,COMMUNICATION	323	357	371	392	370	396	399	407	386	413	415	1337	1443	1572
% CHG SAME QTR LAST YR	4.7	8.3	13.1	5.7	14.9	11.0	7.5	3.6	4.1	4.2	3.9	9.7	7.9	9.0

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 38: TENNESSEE TAXABLE SALES
SEASONALLY ADJUSTED
(MILLIONS OF 1982 DOLLARS)

	HISTORY		FORECAST - DATA									ANNUAL		
	198901	198902	198903	198904	199001	199002	199003	199004	199101	199102	199103	1988	1989	1990
TOTAL	7769	7656	7713	7710	7723	7751	7779	7814	7865	7896	7934	30932	30848	31067
% CHG PREV QTR SAAR	3.4	-5.7	3.0	-0.1	0.6	1.5	1.5	1.8	2.6	1.6	1.9	2.0	-0.3	0.7
% CHG SAME QTR LAST YR	0.2	-1.8	0.4	0.1	-0.6	1.2	0.9	1.4	1.8	1.9	2.0	2.0	-0.3	0.7
AUTO DEALERS	908	872	865	866	878	886	894	906	916	918	921	3649	3511	3563
% CHG PREV QTR SAAR	20.7	-14.8	-3.5	0.6	5.6	3.8	3.5	5.7	4.5	0.8	1.4	1.4	-3.8	1.5
% CHG SAME QTR LAST YR	-5.4	-9.4	0.6	-0.1	-3.4	1.6	3.4	4.6	4.4	3.6	3.1	1.4	-3.8	1.5
PURCHASES FROM MANUFACTURERS	559	566	580	566	566	567	568	570	572	574	577	2215	2270	2271
% CHG PREV QTR SAAR	-6.1	4.9	10.4	-9.2	-0.1	0.8	0.8	1.7	1.1	1.4	1.9	4.3	2.5	0.1
% CHG SAME QTR LAST YR	0.9	1.2	8.5	-0.3	1.3	0.2	-2.0	0.8	1.1	1.3	1.5	4.3	2.5	0.1
MISC DURABLE GOODS	1254	1209	1225	1219	1207	1206	1205	1209	1212	1215	1222	5088	4907	4827
% CHG PREV QTR SAAR	2.9	-13.6	5.4	-1.9	-3.8	-0.4	-0.5	1.5	0.8	1.0	2.2	-1.0	-3.6	-1.6
% CHG SAME QTR LAST YR	-2.8	-6.1	-3.2	-2.1	-3.7	-0.2	-1.7	-0.8	0.4	0.7	1.4	-1.0	-3.6	-1.6
EATING AND DRINKING PLACES	608	594	597	600	603	607	611	615	621	626	631	2360	2399	2435
% CHG PREV QTR SAAR	8.3	-8.4	1.9	1.8	2.1	2.7	2.6	2.4	4.3	3.3	3.4	3.0	1.7	1.5
% CHG SAME QTR LAST YR	5.2	1.5	-0.6	0.7	-0.8	2.1	2.3	2.5	3.0	3.2	3.4	3.0	1.7	1.5
FOOD STORES	1134	1130	1113	1103	1100	1098	1097	1094	1095	1093	1091	4572	4479	4389
% CHG PREV QTR SAAR	3.1	-1.2	-6.1	-3.4	-1.2	-0.5	-0.4	-1.0	0.4	-0.9	-0.6	-0.6	-2.0	-2.0
% CHG SAME QTR LAST YR	-1.3	-2.4	-2.5	-2.0	-3.0	-2.9	-1.4	-0.8	-0.4	-0.5	-0.5	-0.6	-2.0	-2.0
LIQUOR STORES	49	48	49	48	47	47	47	46	46	45	44	202	194	187
% CHG PREV QTR SAAR	-4.5	-4.3	1.9	-4.4	-6.5	-0.1	-6.1	-6.5	0.1	-6.4	-6.4	-4.1	-3.8	-3.7
% CHG SAME QTR LAST YR	-6.8	-4.0	-1.5	-2.9	-3.4	-2.3	-4.3	-4.8	-3.2	-4.8	-4.8	-4.1	-3.8	-3.7
HOTELS AND MOTELS	179	180	184	184	186	188	190	193	196	199	202	711	727	757
% CHG PREV QTR SAAR	-8.1	4.1	8.8	0.4	3.2	4.9	4.4	5.6	6.0	6.3	6.3	6.1	2.3	4.0
% CHG SAME QTR LAST YR	-0.9	3.7	5.6	1.1	4.1	4.3	3.2	4.6	5.3	5.6	6.1	6.1	2.3	4.0
OTHER RETAIL AND SERVICE	2043	2023	2048	2052	2059	2069	2079	2088	2105	2117	2131	8092	8165	8295
% CHG PREV QTR SAAR	4.7	-3.9	5.0	0.8	1.4	2.0	1.9	1.7	3.3	2.4	2.5	3.1	0.9	1.6
% CHG SAME QTR LAST YR	2.9	-0.1	-0.6	1.6	0.8	2.3	1.5	1.8	2.2	2.3	2.5	3.1	0.9	1.6
MISC NONDURABLE GOODS	698	680	686	688	689	691	694	695	699	702	705	2708	2752	2769
% CHG PREV QTR SAAR	5.6	-9.8	3.3	1.3	0.7	1.2	1.3	1.0	2.3	1.5	1.6	3.2	1.6	0.6
% CHG SAME QTR LAST YR	2.9	1.9	1.9	-0.1	-1.3	1.6	1.1	1.0	1.4	1.5	1.6	3.2	1.6	0.6
TRANSPORTATION,COMMUNICATION	338	352	367	384	388	391	395	398	404	408	411	1336	1442	1572
% CHG PREV QTR SAAR	-25.3	18.3	18.1	19.7	3.7	3.5	4.4	2.8	5.7	4.0	3.2	9.6	7.9	9.0
% CHG SAME QTR LAST YR	4.5	8.3	13.3	5.7	14.7	11.0	7.6	3.6	4.1	4.2	3.9	9.6	7.9	9.0

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 1: TENNESSEE SELECTED INDICATORS

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TN GROSS STATE PRODUCT (MIL. DOL.)..	87850	91806	99041	105971	113430	121907	130461	139529	148876	158939
PERCENTAGE CHANGE.....	4.57	4.50	7.88	7.00	7.04	7.47	7.02	6.95	6.70	6.76
TN GROSS STATE PRODUCT (MIL 82 $)...	70215.7	70342.1	72855.9	74798.8	77618.7	80337.5	82827.6	85223.8	87422.7	89746.5
PERCENTAGE CHANGE.....	0.27	0.18	3.57	2.67	3.77	3.50	3.10	2.89	2.58	2.66
US GROSS NATIONAL PRODUCT (BIL 82 $)	4142.7	4225.5	4329.5	4454.7	4574.1	4696.0	4809.2	4925.0	5034.7	5155.2
PERCENTAGE CHANGE.....	2.94	2.00	2.46	2.89	2.68	2.66	2.41	2.41	2.23	2.39
TN PERSONAL INCOME (MIL. DOL.).....	72236	76435	82445	88321	95189	102207	109443	117317	125771	134735
PERCENTAGE CHANGE.....	7.43	5.81	7.86	7.13	7.78	7.37	7.08	7.19	7.21	7.13
TN PERSONAL INCOME (MIL 82 $).....	55396.6	56116.5	57733.3	58768.8	60542.8	62054.1	63483.5	64952.8	66429.7	67922.6
PERCENTAGE CHANGE.....	2.54	1.30	2.88	1.79	3.02	2.50	2.30	2.31	2.27	2.25
US PERSONAL INCOME (BIL 82 $).....	3399.1	3471.0	3550.2	3640.2	3711.5	3791.0	3868.3	3949.7	4026.0	4108.9
PERCENTAGE CHANGE.....	4.10	2.12	2.28	2.53	1.96	2.14	2.04	2.11	1.93	2.06
TN EMPLOYED PERSONS (THOUS).....	2233.4	2252.5	2290.5	2323.1	2361.4	2383.4	2418.8	2457.9	2495.3	2529.2
PERCENTAGE CHANGE.....	0.88	0.86	1.69	1.42	1.65	0.93	1.49	1.61	1.52	1.36
US EMPLOYED PERSONS (MIL).....	117.5	118.8	120.7	122.8	124.5	126.1	127.3	128.9	130.2	131.8
PERCENTAGE CHANGE.....	2.16	1.19	1.52	1.76	1.43	1.27	0.97	1.21	1.04	1.20
TN UNEMPLOYMENT RATE.....	5.3	5.6	5.4	5.2	5.0	5.1	5.1	5.0	5.2	5.0
US UNEMPLOYMENT RATE.....	5.2	5.4	5.3	4.9	4.7	4.6	4.8	4.7	4.8	4.7
IMPLICIT DEFLATOR,GSP.....	125.1	130.5	135.9	141.7	146.1	151.7	157.5	163.7	170.3	177.1
PERCENTAGE CHANGE.....	4.29	4.32	4.16	4.22	3.15	3.84	3.80	3.94	4.02	4.00
IMPLICIT DEFLATOR,GNP.....	126.7	132.6	138.6	145.0	151.1	157.7	164.5	171.7	179.4	187.4
PERCENTAGE CHANGE.....	4.47	4.65	4.53	4.65	4.16	4.38	4.36	4.37	4.47	4.45
TN MFG OUTPUT/EMPLOYEE (THOUS 82 $).	40.4	41.0	42.6	44.0	46.4	48.7	50.7	52.5	54.5	56.6
PERCENTAGE CHANGE.....	1.96	1.43	3.86	3.33	5.49	4.85	4.05	3.69	3.74	3.89
US MFG OUTPUT/EMPLOYEE (THOUS 82 $).	47.4	48.8	50.4	52.4	53.4	54.9	56.6	58.4	60.3	62.2
PERCENTAGE CHANGE.....	2.87	3.01	3.38	3.84	2.00	2.85	3.06	3.13	3.20	3.15
TN PER CAPITA INCOME ($).....	14637	15361	16434	17458	18614	19879	21088	22374	23746	25219
PERCENTAGE CHANGE.....	6.55	4.95	6.98	6.23	6.62	6.79	6.09	6.10	6.13	6.20
TN POPULATION (THOUS.).....	4935	4976	5017	5059	5114	5142	5190	5244	5296	5343
PERCENTAGE CHANGE.....	0.82	0.82	0.82	0.84	1.08	0.54	0.94	1.04	1.01	0.87

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 2: TENNESSEE GROSS STATE PRODUCT BY SECTOR
(MILLIONS OF DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
GROSS STATE PRODUCT	87850	91806	99041	105971	113430	121907	130461	139529	148876	158939
PERCENTAGE CHANGE	4.57	4.50	7.88	7.00	7.04	7.47	7.02	6.95	6.70	6.76
MANUFACTURING	22412	22987	24050	25455	27460	29658	31991	34307	36769	39487
PERCENTAGE CHANGE	6.57	2.57	4.62	5.84	7.88	8.01	7.87	7.24	7.18	7.39
DURABLE GOODS	11476	11856	12443	13269	14510	15814	17213	18607	20123	21804
PERCENTAGE CHANGE	5.73	3.32	4.95	6.64	9.35	8.99	8.85	8.10	8.14	8.36
NONDURABLE GOODS	10936	11131	11607	12186	12950	13844	14778	15700	16646	17683
PERCENTAGE CHANGE	7.46	1.78	4.28	4.99	6.27	6.90	6.74	6.24	6.03	6.23
CONSTRUCTION	3182	2903	2943	3005	3243	3547	3838	4076	4304	4548
PERCENTAGE CHANGE	-6.86	-8.76	1.37	2.11	7.93	9.37	8.22	6.19	5.59	5.66
MINING	398	351	354	377	403	436	476	515	561	605
PERCENTAGE CHANGE	3.96	-11.86	0.94	6.33	6.94	8.27	9.06	8.28	8.88	7.77
TRADE	16413	17460	19240	20712	22239	23744	25180	26716	28227	29919
PERCENTAGE CHANGE	4.93	6.38	10.19	7.65	7.37	6.77	6.05	6.10	5.66	5.99
SERVICES	13861	14951	16756	18458	19885	21323	22735	24216	25750	27356
PERCENTAGE CHANGE	4.98	7.87	12.07	10.16	7.73	7.23	6.62	6.51	6.34	6.24
FINANCE,INSURANCE AND REAL ESTATE	12700	13656	15174	16416	17555	18659	19711	20923	22174	23494
PERCENTAGE CHANGE	5.80	7.53	11.12	8.18	6.94	6.29	5.63	6.15	5.98	5.95
TRANS.,COMM.,AND PUBLIC UTIL	6498	6643	7089	7308	7793	8394	9020	9715	10443	11239
PERCENTAGE CHANGE	4.21	2.23	6.72	3.10	6.64	7.70	7.47	7.70	7.49	7.63
GOVERNMENT	10862	11355	11997	12843	13387	14607	15894	17364	18866	20420
PERCENTAGE CHANGE	3.84	4.53	5.66	7.05	4.24	9.11	8.81	9.25	8.65	8.24
FEDERAL CIVILIAN	3459	3512	3665	3796	3817	4161	4570	5129	5684	6232
PERCENTAGE CHANGE	-0.57	1.53	4.34	3.59	0.54	9.00	9.85	12.23	10.81	9.64
FEDERAL MILITARY	548	569	591	625	635	684	737	796	859	927
PERCENTAGE CHANGE	5.30	3.80	3.80	5.76	1.63	7.74	7.77	7.94	7.91	7.97
STATE AND LOCAL	6855	7273	7742	8422	8935	9763	10586	11439	12323	13260
PERCENTAGE CHANGE	6.06	6.11	6.44	8.78	6.09	9.26	8.44	8.06	7.72	7.61
AGRICULTURE	1524	1500	1438	1397	1465	1538	1616	1697	1783	1872
PERCENTAGE CHANGE	-6.80	-1.60	-4.11	-2.91	4.88	4.97	5.08	5.02	5.06	5.04
FARM	1278	1246	1180	1133	1187	1246	1308	1373	1442	1514
PERCENTAGE CHANGE	-8.21	-2.51	-5.30	-3.95	4.80	4.90	5.03	4.96	5.02	4.99
OTHER	247	254	259	263	277	292	307	323	340	358
PERCENTAGE CHANGE	1.25	3.08	1.73	1.84	5.23	5.25	5.29	5.26	5.23	5.24
PER CAPITA GROSS STATE PRODUCT ($)	17801	18451	19743	20947	22182	23710	25138	26610	28109	29750
PERCENTAGE CHANGE	3.72	3.65	7.00	6.10	5.89	6.89	6.02	5.85	5.63	5.84

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 3: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL DURABLE GOODS.....	11476	11856	12443	13269	14510	15814	17213	18607	20123	21804
PERCENTAGE CHANGE.....	5.73	3.32	4.95	6.64	9.35	8.99	8.85	8.10	8.14	8.36
LUMBER AND WOOD PRODUCTS.....	599	620	646	688	735	784	844	913	990	1071
PERCENTAGE CHANGE.....	0.70	3.49	4.28	6.44	6.89	6.55	7.75	8.17	8.36	8.20
FURNITURE AND FIXTURES.....	774	818	853	898	925	967	1010	1055	1104	1155
PERCENTAGE CHANGE.....	9.67	5.59	4.32	5.32	2.98	4.51	4.44	4.50	4.64	4.57
STONE,CLAY AND GLASS.....	734	748	780	832	909	992	1075	1162	1251	1341
PERCENTAGE CHANGE.....	2.20	2.04	4.20	6.63	9.31	9.11	8.43	8.02	7.72	7.18
PRIMARY METALS.....	714	685	691	730	770	809	850	893	936	980
PERCENTAGE CHANGE.....	6.79	-3.98	0.83	5.68	5.52	4.94	5.12	5.03	4.87	4.64
FABRICATED METAL PRODUCTS.....	1813	1829	1920	2054	2198	2366	2519	2672	2830	3018
PERCENTAGE CHANGE.....	4.09	0.92	4.93	7.02	6.97	7.68	6.46	6.04	5.95	6.62
NONELECTRICAL MACHINERY.....	2178	2216	2304	2445	2805	3168	3587	4031	4515	5032
PERCENTAGE CHANGE.....	6.86	1.75	3.96	6.11	14.73	12.94	13.25	12.38	12.00	11.44
ELECTRICAL MACHINERY.....	1854	1905	2023	2173	2354	2517	2689	2868	3056	3268
PERCENTAGE CHANGE.....	6.22	2.72	6.21	7.45	8.32	6.93	6.83	6.63	6.57	6.94
TRANSPORTATION EQUIPMENT.....	1915	2113	2260	2414	2667	2931	3209	3421	3668	3975
PERCENTAGE CHANGE.....	5.53	10.34	6.96	6.80	10.48	9.90	9.49	6.62	7.22	8.34
INSTRUMENTS.....	426	443	465	501	573	657	753	860	981	1113
PERCENTAGE CHANGE.....	12.10	4.00	5.06	7.84	14.34	14.68	14.60	14.15	14.08	13.40
MISCELLANEOUS DURABLE GOODS.....	469	479	501	533	573	623	675	732	790	853
PERCENTAGE CHANGE.....	4.94	2.05	4.57	6.35	7.49	8.83	8.32	8.41	7.92	7.93

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 4: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL NONDURABLE GOODS	10936	11131	11607	12186	12950	13844	14778	15700	16646	17683
PERCENTAGE CHANGE	7.46	1.78	4.28	4.99	6.27	6.90	6.74	6.24	6.03	6.23
FOOD	2198	2270	2384	2452	2657	2884	3110	3334	3564	3814
PERCENTAGE CHANGE	8.24	3.28	5.00	2.87	8.35	8.57	7.81	7.23	6.89	7.00
TEXTILES	559	564	583	606	639	679	717	760	794	826
PERCENTAGE CHANGE	-0.07	0.99	3.29	4.02	5.35	6.28	5.64	5.89	4.57	3.96
APPAREL	1152	1130	1138	1199	1270	1342	1410	1477	1553	1630
PERCENTAGE CHANGE	1.24	-1.93	0.77	5.37	5.88	5.69	5.04	4.75	5.15	4.97
PAPER	1515	1584	1680	1779	1903	2058	2225	2395	2566	2766
PERCENTAGE CHANGE	8.37	4.50	6.11	5.87	6.98	8.13	8.12	7.67	7.11	7.83
PRINTING AND PUBLISHING	1042	1050	1105	1152	1203	1290	1386	1494	1606	1725
PERCENTAGE CHANGE	5.69	0.80	5.16	4.30	4.46	7.20	7.44	7.82	7.48	7.38
CHEMICALS	2410	2396	2492	2638	2769	2905	3064	3211	3360	3522
PERCENTAGE CHANGE	10.82	-0.58	4.03	5.85	4.94	4.91	5.50	4.79	4.64	4.80
RUBBER AND PLASTICS	1351	1414	1475	1574	1686	1806	1926	2050	2175	2324
PERCENTAGE CHANGE	8.14	4.64	4.29	6.70	7.12	7.16	6.60	6.46	6.12	6.84
LEATHER	225	219	218	221	226	245	250	254	248	246
PERCENTAGE CHANGE	0.65	-2.67	-0.43	1.59	2.19	8.49	2.08	1.34	-2.17	-0.87
OTHER NONDURABLE GOODS	484	504	533	564	597	634	690	724	779	830
PERCENTAGE CHANGE	15.93	4.11	5.68	5.89	5.97	6.19	8.72	4.96	7.58	6.53

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 5: TENNESSEE GROSS STATE PRODUCT BY SECTOR
(MILLIONS OF 1982 DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
GROSS STATE PRODUCT	70215.7	70342.1	72855.9	74798.8	77618.7	80337.5	82827.6	85223.8	87422.8	89746.6
PERCENTAGE CHANGE	0.27	0.18	3.57	2.67	3.77	3.50	3.10	2.89	2.58	2.66
MANUFACTURING	20704.1	21151.6	22165.6	23246.3	24731.8	26081.8	27355.5	28516.9	29634.8	30859.1
PERCENTAGE CHANGE	2.71	2.16	4.79	4.88	6.39	5.46	4.88	4.25	3.92	4.13
DURABLE GOODS	12295.4	12699.2	13374.6	14124.2	15259.0	16279.2	17264.5	18167.5	19055.0	20015.0
PERCENTAGE CHANGE	3.26	3.28	5.32	5.60	8.03	6.69	6.05	5.23	4.89	5.04
NONDURABLE GOODS	8408.7	8452.4	8791.0	9122.1	9472.9	9802.6	10091.0	10349.4	10579.7	10844.2
PERCENTAGE CHANGE	1.91	0.52	4.01	3.77	3.85	3.48	2.94	2.56	2.23	2.50
CONSTRUCTION	2503.1	2301.5	2371.8	2452.8	2595.0	2730.4	2842.7	2900.5	2959.0	3012.7
PERCENTAGE CHANGE	-7.24	-8.05	3.05	3.41	5.80	5.22	4.12	2.03	2.01	1.82
MINING	494.9	465.8	443.3	448.2	464.4	482.4	497.4	507.5	513.1	515.4
PERCENTAGE CHANGE	-4.14	-5.87	-4.84	1.12	3.61	3.88	3.10	2.04	1.11	0.44
TRADE	13817.2	13656.1	14062.9	14241.2	14603.4	14982.5	15326.3	15669.0	15945.6	16273.2
PERCENTAGE CHANGE	0.18	-1.17	2.98	1.27	2.54	2.60	2.29	2.24	1.77	2.05
SERVICES	9907.0	9936.0	10365.6	10681.4	10917.6	11144.4	11336.4	11519.3	11689.8	11850.0
PERCENTAGE CHANGE	-0.10	0.29	4.32	3.05	2.21	2.08	1.72	1.61	1.48	1.37
FINANCE,INSURANCE AND REAL ESTATE.	8565.9	8604.6	8939.1	9085.7	9293.8	9520.5	9714.8	9961.5	10196.6	10429.1
PERCENTAGE CHANGE	0.98	0.45	3.89	1.64	2.29	2.44	2.04	2.54	2.36	2.28
TRANS.,COMM.,AND PUBLIC UTIL	5529.2	5561.7	5836.5	5894.3	6105.6	6300.7	6482.1	6674.6	6849.4	7039.0
PERCENTAGE CHANGE	0.19	0.59	4.94	0.99	3.59	3.19	2.88	2.97	2.62	2.77
GOVERNMENT	7258.5	7219.5	7234.3	7317.2	7459.7	7630.6	7790.6	7975.1	8117.4	8232.8
PERCENTAGE CHANGE	-1.78	-0.54	0.20	1.15	1.95	2.29	2.10	2.37	1.79	1.42
FEDERAL CIVILIAN	2422.6	2364.9	2363.9	2332.5	2338.4	2394.3	2472.3	2601.6	2702.4	2777.4
PERCENTAGE CHANGE	-5.44	-2.38	-0.04	-1.33	0.25	2.39	3.26	5.23	3.87	2.77
FEDERAL MILITARY	384.0	383.2	381.1	383.9	389.0	393.7	398.8	403.7	408.3	413.3
PERCENTAGE CHANGE	0.62	-0.20	-0.56	0.73	1.34	1.21	1.30	1.20	1.16	1.21
STATE AND LOCAL	4451.9	4471.3	4489.3	4600.8	4732.3	4842.6	4919.5	4969.8	5006.7	5042.1
PERCENTAGE CHANGE	0.13	0.44	0.40	2.49	2.86	2.33	1.59	1.02	0.74	0.71
AGRICULTURE	1435.7	1445.2	1436.9	1431.6	1447.4	1464.3	1481.7	1499.4	1517.1	1535.2
PERCENTAGE CHANGE	-7.52	0.66	-0.58	-0.36	1.10	1.17	1.19	1.19	1.18	1.19
FARM	1277.1	1285.7	1276.4	1270.4	1285.4	1301.5	1318.3	1335.3	1352.4	1369.9
PERCENTAGE CHANGE	-8.44	0.67	-0.72	-0.48	1.18	1.26	1.29	1.29	1.28	1.29
OTHER	158.6	159.5	160.4	161.2	162.0	162.7	163.4	164.1	164.7	165.3
PERCENTAGE CHANGE	0.63	0.59	0.55	0.51	0.48	0.45	0.42	0.40	0.37	0.35
PER CAPITA GROSS STATE PRODUCT ($)	14227.5	14137.0	14522.9	14785.4	15178.5	15625.1	15959.9	16253.1	16505.9	16798.4
PERCENTAGE CHANGE	-0.55	-0.64	2.73	1.81	2.66	2.94	2.14	1.84	1.56	1.77

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 6: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1982 DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL DURABLE GOODS	12295.4	12699.2	13374.6	14124.2	15259.0	16279.2	17264.5	18167.5	19055.0	20015.0
PERCENTAGE CHANGE	3.26	3.28	5.32	5.60	8.03	6.69	6.05	5.23	4.89	5.04
LUMBER AND WOOD PRODUCTS	468.0	480.5	499.4	519.5	541.6	560.3	580.3	599.2	617.7	635.8
PERCENTAGE CHANGE	-3.44	2.66	3.94	4.02	4.25	3.46	3.57	3.25	3.09	2.92
FURNITURE AND FIXTURES	592.1	610.6	628.9	651.3	651.7	652.2	652.5	652.9	653.3	653.6
PERCENTAGE CHANGE	6.00	3.13	3.00	3.55	0.07	0.07	0.06	0.06	0.05	0.06
STONE,CLAY AND GLASS	608.9	614.7	637.6	666.5	703.9	736.5	765.4	792.3	817.2	840.2
PERCENTAGE CHANGE	0.93	0.95	3.72	4.53	5.61	4.64	3.92	3.51	3.15	2.82
PRIMARY METALS	560.5	566.3	579.7	593.8	605.1	610.1	613.1	616.4	618.6	620.2
PERCENTAGE CHANGE	0.42	1.04	2.37	2.43	1.90	0.84	0.48	0.55	0.35	0.26
FABRICATED METAL PRODUCTS	1603.9	1605.7	1685.4	1771.5	1841.3	1904.7	1945.5	1982.3	2011.9	2055.7
PERCENTAGE CHANGE	0.36	0.11	4.96	5.11	3.94	3.44	2.14	1.89	1.50	2.17
NONELECTRICAL MACHINERY	4364.2	4538.6	4836.5	5176.5	5855.2	6508.3	7168.3	7799.0	8414.6	9044.8
PERCENTAGE CHANGE	5.40	4.00	6.56	7.03	13.11	11.15	10.14	8.80	7.89	7.49
ELECTRICAL MACHINERY	1714.8	1747.1	1849.0	1962.5	2073.4	2140.3	2200.1	2261.0	2318.6	2387.5
PERCENTAGE CHANGE	3.71	1.89	5.83	6.14	5.65	3.23	2.79	2.77	2.55	2.97
TRANSPORTATION EQUIPMENT	1553.1	1688.4	1778.4	1858.3	1996.2	2105.3	2206.8	2257.1	2318.6	2409.4
PERCENTAGE CHANGE	2.04	8.71	5.33	4.49	7.42	5.46	4.82	2.28	2.73	3.92
INSTRUMENTS	384.9	396.4	409.3	430.1	473.7	520.4	570.2	623.1	679.2	738.8
PERCENTAGE CHANGE	9.27	2.97	3.25	5.08	10.14	9.86	9.57	9.28	9.00	8.78
MISCELLANEOUS DURABLE GOODS	444.9	450.9	470.4	494.3	516.8	541.0	562.3	584.3	605.4	628.9
PERCENTAGE CHANGE	2.08	1.35	4.33	5.08	4.55	4.68	3.93	3.91	3.62	3.88

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE

CONTROL SOLUTION: NOVEMBER 1989

TABLE 7: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1982 DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL NONDURABLE GOODS	8408.7	8452.4	8791.0	9122.1	9472.9	9802.6	10091.0	10349.4	10579.7	10844.2
PERCENTAGE CHANGE	1.91	0.52	4.01	3.77	3.85	3.48	2.94	2.56	2.23	2.50
FOOD	1704.6	1747.2	1832.5	1886.7	2003.7	2112.1	2211.3	2300.5	2383.8	2472.6
PERCENTAGE CHANGE	3.09	2.50	4.88	2.96	6.21	5.41	4.70	4.03	3.62	3.72
TEXTILES	468.9	468.9	484.5	499.6	516.4	531.6	543.6	553.5	561.2	566.1
PERCENTAGE CHANGE	-1.00	0.00	3.33	3.12	3.36	2.95	2.26	1.81	1.39	0.89
APPAREL	1041.3	1020.5	1032.3	1058.1	1090.2	1118.8	1139.2	1153.0	1164.0	1173.1
PERCENTAGE CHANGE	-0.67	-2.00	1.16	2.50	3.03	2.62	1.83	1.21	0.95	0.78
PAPER	1090.0	1122.7	1194.2	1252.2	1313.2	1367.5	1419.0	1464.7	1506.0	1563.2
PERCENTAGE CHANGE	2.09	3.00	6.37	4.86	4.87	4.13	3.77	3.22	2.82	3.80
PRINTING AND PUBLISHING	692.9	684.0	717.5	739.6	751.9	767.8	786.0	804.9	822.5	839.2
PERCENTAGE CHANGE	0.88	-1.27	4.89	3.09	1.66	2.12	2.37	2.41	2.18	2.04
CHEMICALS	1775.5	1738.0	1808.8	1899.8	1945.5	1982.3	2015.5	2047.8	2077.1	2107.8
PERCENTAGE CHANGE	2.18	-2.11	4.07	5.03	2.41	1.89	1.68	1.60	1.43	1.48
RUBBER AND PLASTICS	1231.0	1269.5	1317.1	1376.5	1439.3	1499.0	1552.8	1602.1	1648.0	1708.4
PERCENTAGE CHANGE	4.80	3.12	3.76	4.51	4.56	4.15	3.59	3.18	2.86	3.67
LEATHER	200.8	195.5	194.9	196.8	196.6	203.7	199.4	194.2	184.3	176.6
PERCENTAGE CHANGE	-2.34	-2.66	-0.31	1.02	-0.14	3.61	-2.08	-2.63	-5.10	-4.19
OTHER NONDURABLE GOODS	203.8	206.2	209.3	212.6	216.1	219.9	224.1	228.7	232.9	237.1
PERCENTAGE CHANGE	0.24	1.18	1.49	1.60	1.60	1.80	1.90	2.03	1.84	1.82

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 8: TENNESSEE EMPLOYMENT BY SECTOR
(THOUSANDS OF JOBS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
NONAGRICULTURAL JOBS	2080.1	2098.8	2140.6	2191.7	2237.0	2282.0	2321.7	2366.9	2406.7	2448.2
PERCENTAGE CHANGE	0.69	0.90	1.99	2.39	2.07	2.01	1.74	1.95	1.68	1.73
MANUFACTURING	511.9	515.6	520.2	528.0	532.5	535.6	539.9	542.8	543.7	545.0
PERCENTAGE CHANGE	0.73	0.72	0.90	1.50	0.85	0.58	0.80	0.53	0.17	0.23
DURABLE GOODS	254.7	258.7	262.5	267.1	270.3	273.5	276.4	279.9	282.4	285.5
PERCENTAGE CHANGE	1.40	1.57	1.49	1.75	1.20	1.17	1.06	1.24	0.91	1.09
NONDURABLE GOODS	257.2	256.9	257.7	260.9	262.2	262.1	263.4	262.9	261.3	259.5
PERCENTAGE CHANGE	0.08	-0.13	0.30	1.24	0.49	-0.03	0.53	-0.21	-0.61	-0.70
CONSTRUCTION	91.5	91.0	92.6	96.7	98.2	101.1	103.7	104.9	105.5	105.8
PERCENTAGE CHANGE	-3.14	-0.55	1.77	4.44	1.51	2.96	2.57	1.23	0.53	0.33
MINING	6.5	6.1	5.8	5.6	5.5	5.4	5.3	5.3	5.2	5.2
PERCENTAGE CHANGE	-3.65	-5.95	-5.63	-3.28	-1.94	-0.45	-2.46	-0.22	-1.68	0.19
TRADE	490.9	494.1	504.8	522.6	535.0	545.1	551.5	560.9	567.5	574.5
PERCENTAGE CHANGE	0.56	0.64	2.17	3.53	2.37	1.89	1.17	1.70	1.18	1.24
SERVICES	439.5	448.9	467.3	482.8	503.1	526.1	548.0	575.1	601.2	628.6
PERCENTAGE CHANGE	2.22	2.13	4.09	3.34	4.20	4.57	4.16	4.95	4.54	4.55
FINANCE,INSURANCE AND REAL ESTATE	106.0	107.9	110.5	112.0	113.4	114.9	116.3	117.9	119.5	121.1
PERCENTAGE CHANGE	2.04	1.77	2.44	1.34	1.26	1.32	1.22	1.39	1.33	1.36
TRANS.,COMM.,AND PUBLIC UTILITIES	109.6	110.0	112.6	113.3	115.0	116.1	116.2	117.8	119.1	120.7
PERCENTAGE CHANGE	0.75	0.38	2.34	0.67	1.48	0.93	0.14	1.33	1.15	1.34
GOVERNMENT	324.1	325.4	327.1	330.7	334.4	337.8	340.8	342.2	344.9	347.2
PERCENTAGE CHANGE	-0.46	0.40	0.51	1.09	1.13	1.00	0.91	0.42	0.79	0.67
FEDERAL,CIVILIAN	60.4	59.2	59.3	60.3	61.8	62.9	64.0	64.7	65.2	65.4
PERCENTAGE CHANGE	-4.96	-1.91	0.14	1.72	2.41	1.76	1.73	1.11	0.84	0.25
STATE AND LOCAL	263.8	266.2	267.8	270.3	272.6	274.9	276.9	277.6	279.7	281.9
PERCENTAGE CHANGE	0.63	0.93	0.59	0.95	0.84	0.83	0.72	0.25	0.77	0.76
TOTAL EMPLOYMENT (THOUS. PERSONS)	2233.4	2252.5	2290.5	2323.1	2361.4	2383.4	2418.8	2457.9	2495.3	2529.2
PERCENTAGE CHANGE	0.88	0.86	1.69	1.42	1.65	0.93	1.49	1.61	1.52	1.36
UNEMPLOYMENT (THOUS. PERSONS)	124.3	134.3	131.2	126.2	123.1	127.7	129.5	130.4	135.6	132.4
PERCENTAGE CHANGE	-8.58	8.04	-2.36	-3.77	-2.51	3.76	1.42	0.72	3.95	-2.34
UNEMPLOYMENT RATE (PERCENT)	5.3	5.6	5.4	5.2	5.0	5.1	5.1	5.0	5.2	5.0
CIVILIAN LABOR FORCE (THOUS.PERSONS)	2357.7	2386.9	2421.7	2449.3	2484.4	2511.0	2548.3	2588.3	2630.9	2661.6
PERCENTAGE CHANGE	0.33	1.24	1.46	1.14	1.43	1.07	1.49	1.57	1.65	1.17

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 9: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL DURABLE GOODS	254.7	258.7	262.5	267.1	270.3	273.5	276.4	279.9	282.4	285.5
PERCENTAGE CHANGE	1.40	1.57	1.49	1.75	1.20	1.17	1.06	1.24	0.91	1.09
LUMBER AND WOOD PRODUCTS	19.8	19.8	20.0	20.4	20.3	20.2	20.3	20.6	20.8	21.0
PERCENTAGE CHANGE	-1.38	0.00	1.28	1.92	-0.39	-0.86	0.51	1.76	1.09	0.83
FURNITURE AND FIXTURES	29.0	30.0	30.1	30.4	30.7	30.7	31.0	31.6	31.9	32.3
PERCENTAGE CHANGE	9.40	3.76	0.25	0.93	0.99	0.00	0.98	1.94	0.95	1.25
STONE,CLAY AND GLASS	15.1	14.9	15.0	15.0	14.9	14.9	15.0	15.0	15.0	14.9
PERCENTAGE CHANGE	0.29	-1.30	0.90	-0.06	-0.80	-0.17	0.86	-0.12	-0.24	-0.15
PRIMARY METALS	15.6	15.5	15.4	15.5	15.4	15.4	15.2	15.1	15.0	14.8
PERCENTAGE CHANGE	1.67	-0.48	-0.59	0.44	-1.02	0.42	-1.55	-0.63	-0.87	-1.04
FABRICATED METAL PRODUCTS	41.5	41.8	42.7	44.3	46.3	48.0	49.2	50.1	50.9	51.5
PERCENTAGE CHANGE	-1.27	0.80	2.09	3.75	4.49	3.60	2.56	1.91	1.45	1.35
NONELECTRICAL MACHINERY	37.6	37.5	38.3	39.1	39.1	39.1	39.4	39.9	40.3	40.7
PERCENTAGE CHANGE	0.02	-0.20	2.13	2.06	-0.07	0.02	0.71	1.41	0.86	1.06
ELECTRICAL MACHINERY	39.4	39.8	40.4	40.7	40.2	40.2	39.9	39.3	39.1	39.1
PERCENTAGE CHANGE	2.23	1.01	1.67	0.63	-1.12	-0.14	-0.82	-1.52	-0.35	-0.09
TRANSPORTATION EQUIPMENT	34.3	36.9	38.0	38.4	39.5	40.6	41.6	43.0	44.0	45.3
PERCENTAGE CHANGE	0.80	7.57	2.82	1.21	2.83	2.89	2.46	3.23	2.32	3.09
INSTRUMENTS	10.3	10.4	10.4	10.6	10.8	11.0	11.1	11.2	11.2	11.2
PERCENTAGE CHANGE	6.67	1.61	-0.33	1.89	2.07	1.60	1.09	0.59	0.17	-0.04
MISCELLANEOUS DURABLE GOODS	12.2	11.9	12.1	12.7	13.1	13.5	13.8	14.1	14.3	14.6
PERCENTAGE CHANGE	-1.94	-1.84	1.20	4.74	3.58	2.89	2.37	2.05	1.81	1.70

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 10: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL NONDURABLE GOODS	257.2	256.9	257.7	260.9	262.2	262.1	263.4	262.9	261.3	259.5
PERCENTAGE CHANGE	0.08	-0.13	0.30	1.24	0.49	-0.03	0.53	-0.21	-0.61	-0.70
FOOD	39.7	39.8	40.0	40.4	40.7	40.8	41.4	41.8	41.0	40.1
PERCENTAGE CHANGE	0.58	0.30	0.35	0.95	0.94	0.23	1.46	0.81	-1.71	-2.35
TEXTILES	22.1	21.9	21.8	22.0	22.5	22.1	22.4	21.8	21.4	20.9
PERCENTAGE CHANGE	-3.91	-0.85	-0.61	0.72	2.31	-1.63	1.27	-2.61	-1.93	-2.30
APPAREL	63.1	62.0	61.2	61.8	62.1	62.4	62.5	62.0	61.2	60.3
PERCENTAGE CHANGE	-2.80	-1.72	-1.24	0.89	0.57	0.47	0.10	-0.77	-1.34	-1.47
PAPER	19.9	20.2	20.7	20.9	20.9	21.0	21.1	21.1	21.3	21.4
PERCENTAGE CHANGE	2.18	1.47	2.44	0.82	0.04	0.27	0.49	0.26	0.73	0.80
PRINTING AND PUBLISHING	36.0	36.4	37.4	38.6	40.0	41.0	42.4	42.8	44.2	45.7
PERCENTAGE CHANGE	1.92	1.30	2.60	3.30	3.62	2.38	3.53	1.00	3.14	3.46
CHEMICALS	38.9	38.7	38.8	39.3	38.5	37.7	36.9	36.9	36.1	35.3
PERCENTAGE CHANGE	2.12	-0.57	0.35	1.15	-2.05	-2.11	-2.06	0.03	-2.04	-2.38
RUBBER AND PLASTICS	25.9	26.3	26.5	26.7	26.9	27.2	27.4	27.5	27.5	27.6
PERCENTAGE CHANGE	3.43	1.58	0.65	0.77	0.90	0.81	0.91	0.43	0.10	0.37
LEATHER AND LEATHER PRODUCTS	9.5	9.2	9.0	9.0	8.2	7.7	7.1	6.7	6.3	5.9
PERCENTAGE CHANGE	-0.31	-3.35	-2.45	0.79	-8.80	-6.29	-7.41	-5.93	-6.28	-6.45
OTHER NONDURABLE GOODS	2.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PERCENTAGE CHANGE	-2.07	9.15	0.44	-0.47	-0.25	-0.13	-0.07	-0.04	-0.02	-0.01

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 11: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR
(DOLLARS)

	FORECAST-DATA								
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ALL SECTORS	21242	22186	23504	24618	25860	27142	28559	30146	31894	33700
PERCENTAGE CHANGE	5.71	4.44	5.94	4.74	5.05	4.95	5.22	5.56	5.80	5.66
MANUFACTURING	22913	23839	25289	27087	28609	30071	31803	33712	35871	38038
PERCENTAGE CHANGE	5.40	4.04	6.09	7.11	5.62	5.11	5.76	6.00	6.40	6.04
DURABLE GOODS	23979	24899	26485	28324	29791	31286	33023	34890	36977	39225
PERCENTAGE CHANGE	4.59	3.84	6.37	6.94	5.18	5.02	5.55	5.65	5.98	6.08
NONDURABLE GOODS	21857	22770	24071	25819	27390	28804	30523	32459	34675	36733
PERCENTAGE CHANGE	6.21	4.18	5.71	7.26	6.08	5.16	5.97	6.34	6.83	5.93
CONSTRUCTION	23373	24144	25718	26883	28190	29574	31101	32785	34659	36667
PERCENTAGE CHANGE	7.68	3.30	6.52	4.53	4.86	4.91	5.16	5.41	5.72	5.80
MINING	26024	27487	29126	30593	32238	34027	35668	37523	39265	41178
PERCENTAGE CHANGE	2.46	5.62	5.96	5.04	5.38	5.55	4.82	5.20	4.64	4.87
TRADE	16161	16868	17954	18803	19703	20609	21687	22964	24341	25753
PERCENTAGE CHANGE	5.63	4.37	6.44	4.73	4.78	4.60	5.23	5.89	6.00	5.80
SERVICES	20195	21305	22673	23270	24312	25495	26876	28429	30182	32017
PERCENTAGE CHANGE	6.72	5.50	6.42	2.63	4.48	4.87	5.42	5.78	6.16	6.08
FINANCE,INSURANCE AND REAL ESTATE.	23921	25094	26694	28542	30390	32215	34131	36176	38408	40769
PERCENTAGE CHANGE	5.85	4.90	6.37	6.92	6.48	6.01	5.95	5.99	6.17	6.15
TRANS.,COMM.,AND PUBLIC UTIL	28811	30112	31851	33384	35036	36859	37922	39223	40760	42439
PERCENTAGE CHANGE	6.80	4.52	5.77	4.81	4.95	5.20	2.88	3.43	3.92	4.12
GOVERNMENT	21730	22619	23683	24606	25923	27303	28718	30303	31867	33482
PERCENTAGE CHANGE	4.30	4.09	4.70	3.90	5.35	5.32	5.18	5.52	5.16	5.07
FEDERAL,CIVILIAN	31615	32708	34025	37176	39490	41957	44498	47340	50369	53531
PERCENTAGE CHANGE	5.20	3.45	4.03	9.26	6.23	6.25	6.06	6.39	6.40	6.28
STATE AND LOCAL	19467	20374	21392	21801	22848	23951	25073	26334	27553	28831
PERCENTAGE CHANGE	4.66	4.66	4.99	1.91	4.80	4.83	4.69	5.03	4.63	4.64
AGRICULTURE	9592	9893	10158	10103	10713	11303	12003	12778	13659	14547
PERCENTAGE CHANGE	-1.49	3.15	2.67	-0.54	6.05	5.50	6.20	6.46	6.89	6.50

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 12: TENNESSEE DURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY BY SECTOR
(DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL DURABLE GOODS	23979	24899	26485	28324	29791	31286	33023	34890	36977	39225
PERCENTAGE CHANGE	4.59	3.84	6.37	6.94	5.18	5.02	5.55	5.65	5.98	6.08
LUMBER AND WOOD PRODUCTS	15472	15975	16769	18087	19170	20026	20977	21895	22995	24475
PERCENTAGE CHANGE	5.22	3.25	4.97	7.86	5.99	4.46	4.75	4.38	5.02	6.44
FURNITURE AND FIXTURES	18468	19216	20453	22148	23213	24018	25093	26070	27221	28210
PERCENTAGE CHANGE	8.71	4.05	6.44	8.29	4.81	3.47	4.48	3.89	4.42	3.63
STONE,CLAY AND GLASS	27393	27715	29238	31065	32814	34502	36667	39202	41990	44907
PERCENTAGE CHANGE	4.86	1.17	5.50	6.25	5.63	5.14	6.27	6.92	7.11	6.95
PRIMARY METALS	28383	29010	30353	32162	34004	35345	37316	39188	41325	43694
PERCENTAGE CHANGE	5.72	2.21	4.63	5.96	5.73	3.94	5.58	5.01	5.45	5.73
FABRICATED METAL PRODUCTS	24801	25809	27050	28919	29904	30694	31638	32928	34339	36005
PERCENTAGE CHANGE	3.79	4.06	4.81	6.91	3.40	2.64	3.08	4.08	4.28	4.85
NONELECTRICAL MACHINERY	25632	26140	28126	29960	32175	34205	36362	38734	41351	44147
PERCENTAGE CHANGE	3.38	1.98	7.60	6.52	7.39	6.31	6.31	6.52	6.76	6.76
ELECTRICAL MACHINERY	24263	25523	27077	29481	31064	32937	35105	37546	40245	43055
PERCENTAGE CHANGE	5.14	5.20	6.09	8.88	5.37	6.03	6.58	6.95	7.19	6.98
TRANSPORTATION EQUIPMENT	28117	29523	31790	34018	35484	37694	40369	43140	46465	49722
PERCENTAGE CHANGE	5.01	5.00	7.68	7.01	4.31	6.23	7.10	6.86	7.71	7.01
INSTRUMENTS	25122	26184	27475	29288	31028	32783	34744	36449	37430	39357
PERCENTAGE CHANGE	3.38	4.23	4.93	6.60	5.94	5.66	5.98	4.91	2.69	5.15
MISCELLANEOUS DURABLE GOODS	20299	21063	21871	22763	23707	24677	25699	26787	27954	29174
PERCENTAGE CHANGE	3.89	3.76	3.84	4.08	4.15	4.09	4.14	4.23	4.36	4.36

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 13: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY
(DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL NONDURABLE GOODS	21857	22770	24071	25819	27390	28804	30523	32459	34675	36733
PERCENTAGE CHANGE	6.21	4.18	5.71	7.26	6.08	5.16	5.97	6.34	6.83	5.93
FOOD	23730	24662	26151	28075	29551	31148	33366	35688	38257	40528
PERCENTAGE CHANGE	5.50	3.93	6.04	7.36	5.26	5.40	7.12	6.96	7.20	5.93
TEXTILES	18643	19044	20003	21191	21852	23152	24179	25586	26919	28250
PERCENTAGE CHANGE	12.61	2.15	5.04	5.94	3.12	5.95	4.44	5.82	5.21	4.94
APPAREL	11580	11786	12160	12912	13598	14222	14982	15896	16858	17859
PERCENTAGE CHANGE	2.03	1.78	3.17	6.19	5.31	4.59	5.34	6.11	6.05	5.94
PAPER	30445	31959	33976	36579	39127	41679	44319	47177	50280	53600
PERCENTAGE CHANGE	5.75	4.97	6.31	7.66	6.96	6.52	6.33	6.45	6.58	6.60
PRINTING AND PUBLISHING	20005	20959	22332	23997	25661	27203	28826	30550	32398	34355
PERCENTAGE CHANGE	4.50	4.77	6.55	7.46	6.93	6.01	5.97	5.98	6.05	6.04
CHEMICALS	34098	35516	37397	40342	43611	45568	48362	50928	55044	57918
PERCENTAGE CHANGE	4.32	4.16	5.30	7.88	8.10	4.49	6.13	5.31	8.08	5.22
RUBBER AND PLASTICS	25807	27147	28535	30466	32444	34176	36330	38682	41255	43954
PERCENTAGE CHANGE	5.92	5.19	5.11	6.77	6.49	5.34	6.30	6.47	6.65	6.54
LEATHER AND LEATHER PRODUCTS	17477	17983	18763	19004	19484	20254	21328	22496	23723	25002
PERCENTAGE CHANGE	17.99	2.90	4.34	1.28	2.53	3.95	5.30	5.48	5.46	5.39
OTHER NONDURABLE GOODS	27497	30081	32450	34839	37098	39297	41627	44338	47369	50669
PERCENTAGE CHANGE	9.66	9.40	7.88	7.36	6.48	5.93	5.93	6.51	6.83	6.97

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 14: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR
(1982 DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ALL SECTORS	16290	16289	16459	16381	16448	16479	16566	16690	16846	16989
PERCENTAGE CHANGE	0.90	-0.01	1.05	-0.47	0.41	0.19	0.53	0.75	0.93	0.85
MANUFACTURING	17572	17502	17709	18023	18196	18258	18448	18665	18946	19176
PERCENTAGE CHANGE	0.60	-0.40	1.19	1.77	0.96	0.34	1.04	1.18	1.51	1.21
DURABLE GOODS	18389	18280	18547	18847	18948	18995	19156	19317	19531	19774
PERCENTAGE CHANGE	-0.17	-0.59	1.46	1.62	0.54	0.25	0.84	0.84	1.11	1.25
NONDURABLE GOODS	16762	16718	16856	17180	17421	17488	17705	17971	18315	18518
PERCENTAGE CHANGE	1.38	-0.27	0.83	1.92	1.40	0.38	1.24	1.50	1.91	1.11
CONSTRUCTION	17925	17726	18009	17888	17929	17956	18040	18151	18306	18485
PERCENTAGE CHANGE	2.79	-1.11	1.60	-0.67	0.23	0.15	0.47	0.61	0.85	0.98
MINING	19958	20180	20396	20357	20504	20659	20690	20774	20739	20759
PERCENTAGE CHANGE	-2.20	1.12	1.07	-0.19	0.73	0.75	0.15	0.41	-0.17	0.09
TRADE	12394	12384	12573	12512	12532	12513	12580	12714	12857	12983
PERCENTAGE CHANGE	0.82	-0.08	1.52	-0.49	0.16	-0.15	0.54	1.07	1.12	0.98
SERVICES	15487	15642	15877	15484	15463	15479	15590	15740	15941	16140
PERCENTAGE CHANGE	1.87	1.00	1.50	-2.48	-0.14	0.10	0.72	0.96	1.28	1.25
FINANCE,INSURANCE AND REAL ESTATE.	18345	18424	18693	18992	19329	19559	19798	20029	20286	20553
PERCENTAGE CHANGE	1.03	0.43	1.46	1.60	1.78	1.19	1.22	1.17	1.28	1.31
TRANS.,COMM.,AND PUBLIC UTIL	22095	22108	22304	22214	22284	22379	21997	21716	21529	21394
PERCENTAGE CHANGE	1.95	0.06	0.89	-0.41	0.31	0.43	-1.71	-1.28	-0.86	-0.62
GOVERNMENT	16664	16606	16584	16373	16488	16577	16658	16778	16831	16879
PERCENTAGE CHANGE	-0.45	-0.35	-0.13	-1.27	0.70	0.54	0.49	0.72	0.32	0.28
FEDERAL,CIVILIAN	24245	24013	23827	24737	25117	25474	25811	26210	26604	26986
PERCENTAGE CHANGE	0.41	-0.96	-0.78	3.82	1.54	1.42	1.32	1.54	1.50	1.44
STATE AND LOCAL	14929	14958	14980	14507	14532	14542	14544	14580	14553	14534
PERCENTAGE CHANGE	-0.10	0.20	0.14	-3.16	0.18	0.07	0.02	0.25	-0.19	-0.13
AGRICULTURE	7356	7263	7113	6722	6814	6862	6962	7075	7214	7333
PERCENTAGE CHANGE	-5.97	-1.25	-2.07	-5.49	1.37	0.71	1.46	1.61	1.97	1.65

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 15: TENNESSEE DURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY
(1982 DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL DURABLE GOODS	18389	18280	18547	18847	18948	18995	19156	19317	19531	19774
PERCENTAGE CHANGE	-0.17	-0.59	1.46	1.62	0.54	0.25	0.84	0.84	1.11	1.25
LUMBER AND WOOD PRODUCTS	11865	11728	11743	12035	12193	12159	12168	12122	12145	12338
PERCENTAGE CHANGE	0.44	-1.15	0.12	2.49	1.31	-0.28	0.08	-0.38	0.19	1.59
FURNITURE AND FIXTURES	14163	14108	14323	14737	14764	14582	14555	14434	14378	14221
PERCENTAGE CHANGE	3.77	-0.39	1.52	2.89	0.18	-1.23	-0.18	-0.84	-0.39	-1.09
STONE,CLAY AND GLASS	21007	20348	20474	20671	20871	20948	21269	21705	22178	22639
PERCENTAGE CHANGE	0.09	-3.14	0.62	0.96	0.97	0.37	1.53	2.05	2.18	2.08
PRIMARY METALS	21767	21299	21255	21400	21628	21459	21646	21696	21827	22027
PERCENTAGE CHANGE	0.91	-2.15	-0.20	0.68	1.06	-0.78	0.87	0.23	0.60	0.92
FABRICATED METAL PRODUCTS	19020	18948	18942	19243	19020	18635	18352	18231	18137	18151
PERCENTAGE CHANGE	-0.93	-0.38	-0.03	1.59	-1.16	-2.02	-1.52	-0.66	-0.51	0.07
NONELECTRICAL MACHINERY	19657	19192	19696	19936	20465	20767	21092	21445	21841	22256
PERCENTAGE CHANGE	-1.32	-2.37	2.63	1.22	2.65	1.48	1.56	1.67	1.85	1.90
ELECTRICAL MACHINERY	18607	18739	18961	19617	19758	19997	20363	20788	21256	21705
PERCENTAGE CHANGE	0.36	0.71	1.19	3.46	0.72	1.21	1.83	2.08	2.26	2.11
TRANSPORTATION EQUIPMENT	21562	21675	22261	22636	22569	22886	23417	23884	24542	25066
PERCENTAGE CHANGE	0.23	0.52	2.71	1.68	-0.30	1.40	2.32	2.00	2.75	2.13
INSTRUMENTS	19265	19223	19240	19488	19734	19904	20153	20180	19770	19841
PERCENTAGE CHANGE	-1.32	-0.22	0.09	1.29	1.26	0.86	1.25	0.13	-2.03	0.36
MISCELLANEOUS DURABLE GOODS	15567	15464	15316	15147	15078	14982	14907	14830	14765	14707
PERCENTAGE CHANGE	-0.83	-0.66	-0.96	-1.10	-0.45	-0.63	-0.50	-0.52	-0.44	-0.39

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 18: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY
(1982 DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL NONDURABLE GOODS	16762	16718	16856	17180	17421	17488	17705	17971	18315	18518
PERCENTAGE CHANGE	1.38	-0.27	0.83	1.92	1.40	0.38	1.24	1.50	1.91	1.11
FOOD	18199	18107	18313	18681	18795	18911	19355	19759	20207	20431
PERCENTAGE CHANGE	0.70	-0.51	1.14	2.01	0.61	0.62	2.34	2.09	2.27	1.11
TEXTILES	14297	13982	14008	14100	13899	14056	14025	14166	14218	14241
PERCENTAGE CHANGE	7.49	-2.20	0.19	0.66	-1.43	1.14	-0.22	1.00	0.37	0.16
APPAREL	8881	8653	8515	8592	8648	8635	8690	8801	8904	9003
PERCENTAGE CHANGE	-2.61	-2.56	-1.59	0.90	0.66	-0.16	0.64	1.27	1.17	1.11
PAPER	23348	23464	23792	24340	24886	25305	25708	26119	26557	27021
PERCENTAGE CHANGE	0.94	0.50	1.40	2.30	2.24	1.69	1.59	1.60	1.67	1.75
PRINTING AND PUBLISHING	15342	15388	15638	15968	16321	16516	16721	16914	17112	17319
PERCENTAGE CHANGE	-0.25	0.30	1.63	2.11	2.21	1.19	1.24	1.16	1.17	1.21
CHEMICALS	26149	26075	26188	26844	27738	27666	28053	28196	29073	29198
PERCENTAGE CHANGE	-0.42	-0.28	0.43	2.50	3.33	-0.26	1.40	0.51	3.11	0.43
RUBBER AND PLASTICS	19791	19931	19982	20272	20636	20750	21074	21416	21790	22158
PERCENTAGE CHANGE	1.11	0.71	0.26	1.45	1.79	0.55	1.56	1.63	1.75	1.69
LEATHER AND LEATHER PRODUCTS	13403	13203	13139	12645	12393	12297	12371	12455	12530	12604
PERCENTAGE CHANGE	12.62	-1.49	-0.48	-3.76	-2.00	-0.77	0.60	0.68	0.60	0.59
OTHER NONDURABLE GOODS	21087	22085	22724	23182	23595	23859	24146	24548	25019	25543
PERCENTAGE CHANGE	4.67	4.73	2.89	2.02	1.78	1.12	1.20	1.66	1.92	2.09

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 17: TENNESSEE PERSONAL INCOME BY COMPONENTS

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL PERSONAL INCOME (MIL$).....	72236	76435	82445	88321	95189	102207	109443	117317	125771	134735
PERCENTAGE CHANGE.....	7.43	5.81	7.86	7.13	7.78	7.37	7.08	7.19	7.21	7.13
WAGES AND SALARIES.....	44185	46564	50312	53956	57850	61937	66304	71353	76759	82504
PERCENTAGE CHANGE.....	6.43	5.39	8.05	7.24	7.22	7.06	7.05	7.61	7.58	7.49
OTHER LABOR INCOME.....	3918	4147	4420	4750	5082	5387	5678	6026	6387	6774
PERCENTAGE CHANGE.....	5.07	5.85	6.57	7.46	7.00	5.99	5.42	6.13	5.99	6.05
PROPRIETORS' INCOME.....	6906	7292	7742	8210	8959	9658	10351	11004	11796	12661
PERCENTAGE CHANGE.....	9.89	5.59	6.18	6.04	9.12	7.80	7.18	6.31	7.19	7.34
NONFARM	6035	6430	6899	7753	8484	9155	9821	10447	11207	12042
PERCENTAGE CHANGE	6.24	6.55	7.30	12.37	9.43	7.91	7.28	6.38	7.27	7.45
FARM	871	862	843	457	475	503	530	557	589	619
PERCENTAGE CHANGE	44.19	-1.04	-2.22	-45.80	3.92	5.96	5.34	5.17	5.70	5.13
RENT INTEREST DIVIDENDS.....	10485	11243	12192	13273	14598	15882	17080	18191	19337	20555
PERCENTAGE CHANGE.....	12.64	7.23	8.44	8.87	9.98	8.80	7.54	6.51	6.30	6.30
TRANSFER PAYMENTS.....	11225	12060	13088	13915	14917	16031	17233	18529	19918	21352
PERCENTAGE CHANGE.....	7.14	7.44	8.52	6.31	7.20	7.47	7.50	7.52	7.50	7.20
LESS:PERS. CONT. FOR SOCIAL INS...	3675	3967	4301	4660	4973	5319	5702	6141	6624	7142
PERCENTAGE CHANGE.....	10.16	7.93	8.44	8.33	6.73	6.94	7.21	7.70	7.86	7.82
RESIDENCE ADJUSTMENT.....	-808	-906	-1009	-1123	-1243	-1368	-1501	-1645	-1802	-1971
PERCENTAGE CHANGE.....	9.87	12.03	11.41	11.32	10.65	10.11	9.71	9.60	9.50	9.40
PER CAPITA PERSONAL INCOME ($).....	14637	15361	16434	17458	18614	19879	21088	22374	23746	25219
PERCENTAGE CHANGE.....	6.55	4.95	6.98	6.23	6.62	6.79	6.09	6.10	6.13	6.20
TOTAL PERSONAL INCOME (MIL 82 $)....	55397	56117	57733	58769	60543	62054	63483	64953	66430	67923
PERCENTAGE CHANGE.....	2.54	1.30	2.88	1.79	3.02	2.50	2.30	2.31	2.27	2.25
PER CAPITA PERSONAL INCOME (82 $)...	11225	11278	11508	11617	11839	12069	12232	12387	12542	12714
PERCENTAGE CHANGE.....	1.71	0.47	2.04	0.94	1.92	1.94	1.35	1.26	1.25	1.37
TAX AND NONTAX PAYMENTS (MIL $).....	8782	9221	10212	11114	12081	13030	14146	15342	16642	18103
PERCENTAGE CHANGE.....	8.00	5.00	10.74	8.83	8.71	7.86	8.57	8.45	8.47	8.78
DISPOSABLE PERSONAL INCOME (MIL $)..	63454	67213	72233	77207	83108	89177	95296	101975	109129	116631
PERCENTAGE CHANGE.....	7.35	5.92	7.47	6.89	7.64	7.30	6.86	7.01	7.02	6.87
PER CAPITA DISPOSABLE INCOME ($)....	12857	13508	14399	15261	16252	17344	18362	19448	20604	21831
PERCENTAGE CHANGE.....	6.47	5.06	6.59	5.99	6.49	6.72	5.87	5.91	5.95	5.95
DISPOSABLE INCOME (MIL 82 $).....	48662	49346	50582	51374	52859	54143	55278	56459	57640	58796
PERCENTAGE CHANGE.....	2.47	1.41	2.50	1.56	2.89	2.43	2.10	2.14	2.09	2.01
PER CAPITA DISPOSABLE INCOME (82 $).	9860	9917	10083	10155	10337	10530	10651	10767	10883	11005
PERCENTAGE CHANGE.....	1.63	0.58	1.67	0.71	1.79	1.87	1.15	1.09	1.07	1.13

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 18: TENNESSEE SALES
(MILLIONS OF CURRENT DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL	40240	42351	45273	48198	51586	55054	58595	62418	66493	70769
PERCENTAGE CHANGE	4.42	5.24	6.90	6.46	7.03	6.72	6.43	6.52	6.53	6.43
AUTO DEALERS	4571	4851	5250	5639	6057	6381	6753	7168	7576	8026
PERCENTAGE CHANGE	0.76	6.13	8.22	7.42	7.41	5.34	5.84	6.15	5.68	5.95
PURCHASES FROM MANUFACTURES	2962	3094	3287	3495	3759	3969	4190	4434	4674	4932
PERCENTAGE CHANGE	7.41	4.47	6.22	6.35	7.54	5.60	5.55	5.83	5.42	5.52
MISC. DURABLE GOODS	6394	6579	6971	7239	7552	7868	8134	8394	8748	9036
PERCENTAGE CHANGE	0.95	2.89	5.95	3.85	4.32	4.19	3.38	3.19	4.23	3.29
EATING AND DRINKING PLACES	3128	3320	3596	3839	4127	4358	4600	4865	5127	5408
PERCENTAGE CHANGE	6.33	6.12	8.32	6.75	7.51	5.59	5.55	5.77	5.38	5.48
FOOD STORES	5840	5979	6241	6450	6755	7103	7418	7772	8133	8493
PERCENTAGE CHANGE	2.56	2.37	4.39	3.34	4.73	5.16	4.44	4.76	4.64	4.43
LIQUOR STORES	254	255	255	252	253	250	250	250	248	247
PERCENTAGE CHANGE	0.82	0.45	0.20	-1.20	0.42	-1.20	-0.10	-0.01	-0.94	-0.38
HOTELS AND MOTELS	951	1033	1146	1216	1311	1387	1465	1552	1636	1728
PERCENTAGE CHANGE	7.64	8.61	10.99	6.13	7.75	5.79	5.68	5.92	5.40	5.61
OTHER RETAIL AND SERVICE	10666	11321	12165	13303	14580	16180	17856	19638	21602	23720
PERCENTAGE CHANGE	5.66	6.14	7.45	9.36	9.60	10.97	10.36	9.98	10.00	9.81
MISC. NONDURABLE GOODS	3591	3778	4025	4222	4474	4658	4853	5067	5272	5490
PERCENTAGE CHANGE	6.32	5.18	6.54	4.90	5.96	4.13	4.17	4.41	4.05	4.13
TRANSPORTATION,COMMUNICATION	1883	2142	2338	2543	2719	2901	3077	3279	3478	3690
PERCENTAGE CHANGE	13.05	13.77	9.17	8.75	6.91	6.69	6.07	6.57	6.06	6.10
MOTOR VEHICLE REGISTRATIONS	4190	4255	4326	4470	4615	4773	4941	5114	5291	5472
PERCENTAGE CHANGE	0.53	1.54	1.68	3.33	3.25	3.43	3.51	3.50	3.47	3.42

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 19: TENNESSEE SALES
(MILLIONS OF 1982 DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL	30860	31093	31703	32071	32810	33426	33989	34558	35120	35676
PERCENTAGE CHANGE	-0.33	0.76	1.96	1.16	2.30	1.88	1.68	1.67	1.63	1.58
AUTO DEALERS	3505	3561	3676	3752	3852	3874	3917	3969	4001	4046
PERCENTAGE CHANGE	-3.82	1.61	3.22	2.07	2.67	0.56	1.12	1.32	0.82	1.12
PURCHASES FROM MANUFACTURES	2271	2272	2302	2326	2391	2410	2430	2455	2469	2486
PERCENTAGE CHANGE	2.53	0.01	1.32	1.06	2.79	0.80	0.84	1.01	0.57	0.71
MISC. DURABLE GOODS	4904	4830	4881	4817	4803	4777	4718	4647	4621	4555
PERCENTAGE CHANGE	-3.64	-1.50	1.06	-1.32	-0.29	-0.54	-1.23	-1.50	-0.57	-1.42
EATING AND DRINKING PLACES	2399	2437	2518	2554	2625	2646	2668	2694	2708	2726
PERCENTAGE CHANGE	1.49	1.60	3.32	1.43	2.77	0.80	0.84	0.95	0.53	0.67
FOOD STORES	4479	4390	4370	4292	4296	4313	4303	4303	4296	4282
PERCENTAGE CHANGE	-2.10	-2.00	-0.44	-1.81	0.11	0.38	-0.22	-0.01	-0.17	-0.33
LIQUOR STORES	194	187	179	168	161	152	145	138	131	124
PERCENTAGE CHANGE	-3.77	-3.84	-4.42	-6.12	-4.01	-5.69	-4.56	-4.56	-5.49	-4.92
HOTELS AND MOTELS	729	758	803	809	834	842	850	859	864	871
PERCENTAGE CHANGE	2.75	3.98	5.86	0.85	3.00	0.99	0.96	1.10	0.55	0.80
OTHER RETAIL AND SERVICE	8180	8312	8519	8852	9274	9824	10358	10872	11410	11958
PERCENTAGE CHANGE	0.85	1.61	2.49	3.91	4.77	5.93	5.44	4.97	4.94	4.80
MISC. NONDURABLE GOODS	2754	2773	2818	2809	2845	2828	2815	2805	2785	2767
PERCENTAGE CHANGE	1.48	0.70	1.62	-0.32	1.28	-0.60	-0.47	-0.34	-0.74	-0.62
TRANSPORTATION,COMMUNICATION	1444	1573	1637	1692	1729	1761	1785	1815	1837	1860
PERCENTAGE CHANGE	7.91	8.91	4.13	3.34	2.19	1.85	1.34	1.72	1.18	1.26

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 20: TENNESSEE ENERGY CONSUMPTION - SELECTED CATEGORIES

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ELECTRICITY (MIL. KWH).....	71113	72349	74925	76488	79088	81253	83153	84818	86336	87951
PERCENTAGE CHANGE.....	3.15	1.74	3.56	2.09	3.40	2.74	2.34	2.00	1.79	1.87
RESIDENTIAL.....	29701	30056	30848	31380	32290	33063	33793	34542	35293	36051
PERCENTAGE CHANGE.....	4.86	1.20	2.64	1.72	2.90	2.39	2.21	2.22	2.18	2.15
COMMERCIAL.....	5764	5877	6116	6387	6757	7088	7398	7678	7947	8240
PERCENTAGE CHANGE.....	2.03	1.97	4.06	4.44	5.78	4.90	4.38	3.79	3.50	3.69
INDUSTRIAL.....	27295	27770	29078	29682	30776	31626	32298	32778	33138	33564
PERCENTAGE CHANGE.....	1.89	1.74	4.71	2.08	3.69	2.76	2.12	1.49	1.10	1.29
DIRECTLY SERVED COMM AND IND.....	8352	8646	8883	9039	9266	9476	9664	9821	9958	10096
PERCENTAGE CHANGE.....	2.12	3.52	2.74	1.76	2.51	2.26	1.99	1.62	1.40	1.39
GASOLINE (MIL. GAL.).....	2833	2936	3056	3187	3334	3435	3503	3618	3706	3821
PERCENTAGE CHANGE.....	0.18	3.63	4.12	4.28	4.59	3.03	1.99	3.28	2.44	3.11

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 21: TENNESSEE FARM AGRICULTURAL OUTPUT
(MILLIONS OF DOLLARS)

	FORECAST-DATA									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
CASH RECEIPTS	1948.6	1930.4	1876.9	1843.9	1918.4	1996.8	2079.8	2165.3	2255.0	2347.9
PERCENTAGE CHANGE	-4.74	-0.93	-2.77	-1.75	4.04	4.09	4.16	4.11	4.14	4.12
CROPS	935.1	912.2	876.7	852.2	887.3	923.8	962.5	1002.1	1043.8	1086.7
PERCENTAGE CHANGE	-3.12	-2.46	-3.88	-2.80	4.11	4.12	4.19	4.12	4.16	4.11
MEAT ANIMALS	582.2	569.7	550.0	536.2	555.1	575.6	597.3	619.4	642.6	666.5
PERCENTAGE CHANGE	-14.46	-2.15	-3.45	-2.51	3.53	3.68	3.78	3.70	3.74	3.72
DAIRY PRODUCTS	278.0	293.6	294.6	298.7	312.7	327.4	342.9	359.3	376.5	394.7
PERCENTAGE CHANGE	4.48	5.61	0.34	1.40	4.67	4.71	4.73	4.78	4.79	4.83
POULTRY AND EGGS	153.3	155.0	155.5	156.8	163.3	170.0	177.1	184.4	192.0	200.0
PERCENTAGE CHANGE	14.69	1.10	0.33	0.84	4.13	4.12	4.16	4.13	4.15	4.13
EXPENSES	670.9	684.7	697.2	710.9	730.9	751.1	771.5	792.0	812.8	833.8
PERCENTAGE CHANGE	2.63	2.06	1.83	1.96	2.82	2.77	2.71	2.66	2.62	2.58
GROSS OUTPUT	1277.7	1245.7	1179.6	1133.1	1187.5	1245.7	1308.3	1373.3	1442.2	1514.2
PERCENTAGE CHANGE	-8.21	-2.51	-5.30	-3.95	4.80	4.90	5.03	4.96	5.02	4.99
GROSS OUTPUT (MIL 82 $)	1277.1	1285.7	1276.4	1270.4	1285.4	1301.5	1318.3	1335.3	1352.4	1369.9
PERCENTAGE CHANGE	-8.44	0.67	-0.72	-0.48	1.18	1.26	1.29	1.29	1.28	1.29
FARM WAGE AND SALARY JOBS	12.2	12.3	12.4	12.4	12.4	12.4	12.5	12.3	12.3	12.3
PERCENTAGE CHANGE	6.25	0.80	1.28	-0.42	0.54	-0.09	0.27	-0.91	-0.30	-0.25

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

APPENDIX 2: HISTORICAL DATA

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 1: SELECTED U.S. AND TENNESSEE ECONOMIC INDICATORS
SEASONALLY ADJUSTED

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
US GNP (BIL 82 $) SAAR.....	3704.6	3712.4	3733.6	3783.0	3823.5	3872.8	3935.6	3974.8	4010.7	4042.7	4069.4	3717.9	3853.7	4024.4
% CHG PREV QTR SAAR.....	-1.76	0.84	2.30	5.40	4.35	5.26	6.65	4.04	3.66	3.23	2.67	2.74	3.65	4.43
% CHG SAME QTR LAST YR.....	2.93	2.11	1.94	1.66	3.21	4.32	5.41	5.07	4.90	4.39	3.40	2.74	3.65	4.43
US PERS CONS DEFL (1982=100)....	113.5	114.7	115.8	117.6	119.2	120.5	121.8	122.5	123.9	125.1	126.5	114.3	119.8	124.5
% CHG PREV QTR SAAR.....	0.35	4.30	3.89	6.36	5.55	4.43	4.39	2.32	4.65	3.93	4.55	2.44	4.74	3.94
% CHG SAME QTR LAST YR.....	2.07	2.41	2.39	3.70	5.02	5.06	5.18	4.17	3.94	3.82	3.86	2.44	4.74	3.94
TN PERSONAL INCOME (MIL $) SAAR.	57956	58080	58989	60652	61615	62848	64977	64946	66437	67870	69717	57801	62523	67243
% CHG PREV QTR SAAR.....	13.26	0.86	6.41	11.76	6.50	8.25	14.25	-0.19	9.50	8.91	11.34	7.76	8.17	7.55
% CHG SAME QTR LAST YR.....	8.69	8.06	7.19	7.96	6.31	8.21	10.15	7.08	7.83	7.99	7.29	7.76	8.17	7.55
TN PERSONAL INCOME (MIL82$) SAAR	51063	50636	50940	51575	51690	52156	53347	53017	53621	54253	55112	50545	52192	54001
% CHG PREV QTR SAAR.....	12.86	-3.30	2.42	5.08	0.90	3.65	9.45	-2.45	4.64	4.79	6.49	5.20	3.26	3.47
% CHG SAME QTR LAST YR.....	6.49	5.52	4.69	4.10	1.23	3.00	4.72	2.80	3.74	4.02	3.31	5.20	3.26	3.47
US PERSONAL INCOME (BIL82$) SAAR	3092.4	3086.5	3106.9	3123.8	3131.5	3149.8	3209.1	3223.3	3249.9	3275.5	3308.5	3083.6	3153.5	3264.3
% CHG PREV QTR SAAR.....	5.89	-0.77	2.67	2.19	0.98	2.36	7.75	1.78	3.34	3.19	4.09	3.51	2.27	3.51
% CHG SAME QTR LAST YR.....	3.97	3.76	3.38	2.47	1.26	2.05	3.29	3.18	3.78	3.99	3.10	3.51	2.27	3.51
TN NONAGRIC JOBS (THOUS).....	1918.7	1938.4	1955.5	1978.8	1999.1	2022.1	2046.2	2059.7	2066.6	2063.7	2073.7	1929.8	2011.5	2065.9
% CHG PREV QTR SAAR.....	2.57	4.17	3.58	4.85	4.17	4.68	4.85	2.67	1.33	-0.55	1.95	3.32	4.24	2.70
% CHG SAME QTR LAST YR.....	2.98	3.37	3.30	3.79	4.19	4.32	4.64	4.09	3.38	2.06	1.35	3.32	4.24	2.70
US NONAGRIC JOBS (MIL).....	99.2	99.7	100.4	101.0	101.8	102.5	103.5	104.4	105.2	106.0	106.8	99.5	102.2	105.6
% CHG PREV QTR SAAR.....	1.24	1.96	2.78	2.68	3.00	2.89	3.92	3.38	3.22	3.05	3.14	2.06	2.69	3.31
% CHG SAME QTR LAST YR.....	1.99	1.90	1.96	2.16	2.61	2.84	3.12	3.30	3.35	3.39	3.20	2.06	2.69	3.31
TN UNEMPLOYMENT RATE (%).....	7.7	7.7	8.4	7.2	7.0	6.3	5.8	5.5	5.9	5.9	5.9	8.1	6.6	5.8
US UNEMPLOYMENT RATE (%).....	7.2	7.0	6.9	6.6	6.3	6.0	5.9	5.7	5.5	5.5	5.3	7.0	6.2	5.5
BANK PRIME INTEREST RATE (%)....	8.6	7.9	7.5	7.5	8.0	8.4	8.9	8.6	8.8	9.7	10.2	8.3	8.2	9.3
TN MFG JOBS (THOUS).....	490.2	490.0	491.3	491.8	494.1	497.8	506.2	508.3	507.8	507.5	509.2	490.5	497.5	508.2
% CHG PREV QTR SAAR.....	-0.40	-0.20	1.12	0.38	1.86	3.08	6.89	1.72	-0.44	-0.20	1.34	-0.39	1.41	2.16
% CHG SAME QTR LAST YR.....	-0.99	0.09	0.35	0.22	0.79	1.61	3.02	3.37	2.78	1.95	0.60	-0.39	1.41	2.16
TN MFG AVG WEEKLY HOURS.....	41.2	41.4	41.2	41.8	41.2	41.4	41.9	42.0	41.7	41.4	41.3	41.2	41.6	41.6
% CHG PREV QTR SAAR.....	1.95	2.76	-2.62	5.95	-5.79	2.74	4.81	1.07	-3.60	-2.29	-1.43	0.54	0.93	0.05
% CHG SAME QTR LAST YR.....	0.34	0.88	-0.14	1.96	-0.03	-0.03	1.82	0.63	1.21	-0.05	-1.58	0.54	0.93	0.05
TN TAXABLE SALES (MIL $).....	8428	8670	8835	8764	8986	9211	9363	9493	9658	9612	9745	34260	36324	38508
% CHG PREV QTR SAAR.....	4.9	12.0	7.8	-3.2	10.5	10.4	6.7	5.7	7.1	-1.9	5.7	7.9	6.0	6.0
% CHG SAME QTR LAST YR.....	6.7	7.4	9.2	5.2	6.6	6.2	6.0	8.3	7.5	4.3	4.1	7.9	6.0	6.0
TN TAXABLE SALES (MIL 82$).....	7425	7559	7629	7452	7539	7644	7687	7749	7795	7683	7704	29957	30322	30932
% CHG PREV QTR SAAR.....	4.5	7.4	3.8	-9.0	4.7	5.7	2.2	3.3	2.4	-5.6	1.1	5.3	1.2	2.0
% CHG SAME QTR LAST YR.....	4.5	4.9	6.7	1.5	1.5	1.1	0.8	4.0	3.4	0.5	0.2	5.3	1.2	2.0

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 2: TENNESSEE PERSONAL INCOME
SEASONALLY ADJUSTED ANNUAL RATES
(MILLIONS OF DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL PERSONAL INCOME (CUR).....	57956	58080	58989	60652	61615	62848	64977	64946	66437	67870	69717	57801	62523	67243
% CHG PREV QTR SAAR.....	13.26	0.86	6.41	11.76	6.50	8.25	14.25	-0.19	9.50	8.91	11.34	7.76	8.17	7.55
% CHG SAME QTR LAST YR.....	8.69	8.06	7.19	7.96	6.31	8.21	10.15	7.08	7.83	7.99	7.29	7.76	8.17	7.55
WAGES AND SALARIES.....	35784	35582	36360	37333	37804	38614	40261	39860	40973	41987	43238	35511	38503	41515
% CHG PREV QTR SAAR.....	18.20	-2.24	9.04	11.14	5.14	8.85	18.18	-3.92	11.65	10.27	12.46	8.15	8.42	7.82
% CHG SAME QTR LAST YR.....	9.52	7.95	7.61	8.78	5.64	8.52	10.73	6.77	8.38	8.74	7.39	8.15	8.42	7.82
OTHER LABOR INCOME.....	3267	3361	3422	3495	3528	3577	3672	3655	3709	3761	3791	3312	3568	3729
% CHG PREV QTR SAAR.....	9.05	12.02	7.46	8.81	3.83	5.67	11.05	-1.84	6.04	5.73	3.23	7.39	7.74	4.51
% CHG SAME QTR LAST YR.....	6.21	8.77	9.09	9.32	7.99	6.43	7.31	4.58	5.13	5.14	3.24	7.39	7.74	4.51
PROPRIETORS INCOME.....	5172	5306	5353	5740	5834	5905	6023	6097	6268	6307	6467	5239	5876	6285
% CHG PREV QTR SAAR.....	3.64	10.77	3.59	32.21	6.71	4.96	8.24	5.01	11.70	2.51	10.54	10.71	12.14	6.97
% CHG SAME QTR LAST YR.....	10.82	13.69	8.62	11.98	12.80	11.29	12.52	6.22	7.44	6.81	7.37	10.71	12.14	6.97
RENT INTEREST DIVIDENDS.....	7946	7937	7928	8162	8350	8604	8897	8976	9118	9410	9731	7910	8503	9309
% CHG PREV QTR SAAR.....	6.11	-0.45	-0.45	12.34	9.54	12.73	14.33	3.60	6.48	13.44	14.36	6.04	7.50	9.47
% CHG SAME QTR LAST YR.....	6.80	6.69	4.51	4.25	5.08	8.40	12.22	9.97	9.20	9.37	9.37	6.04	7.50	9.47
TRANSFER PAYMENTS.....	9055	9233	9321	9497	9694	9796	9902	10293	10413	10529	10675	9134	9722	10478
% CHG PREV QTR SAAR.....	5.91	8.10	3.87	7.77	8.56	4.28	4.40	16.76	4.75	4.53	5.66	6.94	6.44	7.77
% CHG SAME QTR LAST YR.....	6.93	7.22	7.22	6.40	7.06	6.10	6.23	8.38	7.42	7.48	7.81	6.94	6.44	7.77
LESS PERS CONT FOR SOC INS....	2703	2752	2791	2905	2920	2962	3049	3236	3322	3378	3409	2729	2959	3336
% CHG PREV QTR SAAR.....	5.35	7.45	5.79	17.37	2.08	5.88	12.28	26.88	11.06	6.92	3.72	9.47	8.45	12.75
% CHG SAME QTR LAST YR.....	8.90	10.21	9.24	8.88	8.03	7.63	9.24	11.39	13.77	14.04	11.81	9.47	8.45	12.75
RESIDENCE ADJUSTMENT.....	-565	-587	-604	-670	-675	-686	-729	-699	-722	-746	-776	-576	-690	-736
% CHG PREV QTR SAAR.....	12.18	16.51	12.10	51.41	3.02	6.68	27.53	-15.47	13.83	13.97	17.08	9.97	19.74	6.63
% CHG SAME QTR LAST YR.....	9.07	11.60	10.83	22.04	19.47	16.87	20.70	4.33	6.96	8.75	6.45	9.97	19.74	6.63
TOTAL PERSONAL INCOME (82 $)....	51063	50636	50940	51575	51690	52156	53347	53017	53621	54253	55112	50545	52192	54001
% CHG PREV QTR SAAR.....	12.86	-3.30	2.42	5.08	0.90	3.65	9.45	-2.45	4.64	4.79	6.49	5.20	3.26	3.47
% CHG SAME QTR LAST YR.....	6.49	5.52	4.69	4.10	1.23	3.00	4.72	2.80	3.74	4.02	3.31	5.20	3.26	3.47

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 3: TENNESSEE NONAGRICULTURAL EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	1925.8	1944.4	1971.0	1949.8	2006.2	2028.0	2062.5	2030.4	2073.5	2069.4	2090.2	1929.8	2011.6	2065.9
% CHG SAME QTR LAST YR	2.96	3.33	3.31	3.83	4.17	4.30	4.64	4.13	3.35	2.04	1.34	3.32	4.24	2.70
MINING	7.0	7.0	7.2	6.7	6.8	6.7	6.9	6.5	6.9	6.9	6.6	7.1	6.8	6.7
% CHG SAME QTR LAST YR	-11.06	-10.21	-9.28	-10.31	-1.91	-4.27	-3.72	-2.00	1.46	2.48	-3.86	-7.64	-5.13	-0.49
CONSTRUCTION	90.6	94.6	91.8	86.9	95.1	100.3	98.5	88.6	95.9	98.0	95.3	90.0	95.2	94.4
% CHG SAME QTR LAST YR	5.10	3.27	0.77	4.83	4.97	5.99	7.30	2.00	0.81	-2.33	-3.21	5.10	5.80	-0.79
MANUFACTURING	491.6	491.2	492.0	488.7	495.3	498.8	507.0	505.6	508.8	508.4	510.0	490.5	497.4	508.2
% CHG SAME QTR LAST YR	-1.01	-0.01	0.36	0.31	0.75	1.55	3.04	3.45	2.72	1.92	0.60	-0.39	1.42	2.16
DURABLE GOODS	240.4	239.4	240.6	241.3	244.2	243.0	249.0	249.0	252.0	251.1	252.5	239.3	244.4	251.2
% CHG SAME QTR LAST YR	-0.95	0.32	1.19	1.91	1.61	1.50	3.51	3.16	3.19	3.33	1.41	-0.14	2.13	2.77
NONDURABLE GOODS	251.3	251.8	251.4	247.4	251.1	255.8	257.9	256.6	256.7	257.3	257.5	251.2	253.0	257.0
% CHG SAME QTR LAST YR	-1.08	-0.33	-0.42	-1.20	-0.08	1.60	2.59	3.73	2.26	0.57	-0.17	-0.62	0.73	1.57
TRADE	448.5	457.0	468.7	457.0	472.6	484.1	495.3	477.3	488.4	491.1	496.0	452.1	477.2	488.2
% CHG SAME QTR LAST YR	3.93	3.38	4.02	5.30	5.37	5.92	5.67	4.43	3.35	1.46	0.13	3.85	5.57	2.30
SERVICES	384.6	394.9	391.3	389.5	407.9	419.5	418.7	417.4	432.8	436.1	433.6	384.7	408.9	430.0
% CHG SAME QTR LAST YR	6.74	7.30	6.28	5.88	6.05	6.23	7.02	7.15	6.11	3.96	3.56	6.81	6.30	5.15
FIN,INS,REAL EST	94.6	97.1	98.4	99.0	101.9	102.6	102.2	101.8	104.0	105.0	104.7	95.4	101.4	103.9
% CHG SAME QTR LAST YR	5.74	6.86	8.53	8.16	7.71	5.73	3.86	2.83	2.00	2.31	2.48	6.68	6.32	2.40
TRANS,COMM,PUB UTIL	96.3	99.1	100.9	99.9	103.1	105.0	105.7	105.9	108.5	110.3	110.4	97.6	103.4	108.8
% CHG SAME QTR LAST YR	3.92	5.39	4.85	6.17	7.10	5.99	4.72	6.04	5.27	4.98	4.48	4.92	5.98	5.18
GOVERNMENT	312.5	303.5	320.7	322.1	323.4	311.0	328.2	327.3	328.1	313.7	333.4	312.4	321.2	325.6
% CHG SAME QTR LAST YR	2.24	2.50	2.52	2.94	3.49	2.47	2.36	1.61	1.44	0.88	1.58	2.71	2.81	1.39
FEDERAL,CIVILIAN	61.4	61.7	61.7	63.2	63.5	62.9	63.9	65.6	65.5	62.5	60.5	61.6	63.4	63.5
% CHG SAME QTR LAST YR	-1.07	-0.48	1.65	2.71	3.42	1.95	3.68	3.74	3.20	-0.58	-5.37	0.46	2.94	0.24
STATE AND LOCAL	251.1	241.8	259.0	258.9	259.9	248.1	264.3	261.8	262.6	251.2	272.9	250.8	257.8	262.1
% CHG SAME QTR LAST YR	3.08	3.29	2.72	3.00	3.50	2.61	2.05	1.09	1.01	1.25	3.27	3.28	2.78	1.67

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 4: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS.....	240.4	239.4	240.6	241.3	244.2	243.0	249.0	249.0	252.0	251.1	252.5	239.3	244.4	251.2
% CHG SAME QTR LAST YR.....	-0.95	0.32	1.19	1.91	1.61	1.50	3.51	3.16	3.19	3.33	1.41	-0.14	2.13	2.77
LUMBER AND WOOD.....	18.9	19.1	18.8	19.7	21.2	22.0	22.1	20.2	20.5	19.8	19.7	18.6	21.3	20.1
% CHG SAME QTR LAST YR.....	-0.88	1.96	5.61	12.57	12.37	15.36	17.35	2.71	-3.46	-9.98	-10.86	1.41	14.45	-5.64
FURNITURE AND FIXTURES.....	24.5	24.4	24.5	24.2	24.7	24.7	25.4	25.8	26.0	26.2	27.8	24.5	24.7	26.5
% CHG SAME QTR LAST YR.....	0.00	2.23	0.41	-1.36	0.82	1.09	3.81	6.47	5.54	6.35	9.45	0.65	1.09	6.97
STONE,CLAY AND GLASS.....	15.1	15.4	15.2	15.2	15.0	15.4	15.4	14.9	15.2	15.0	15.1	15.1	15.3	15.1
% CHG SAME QTR LAST YR.....	6.59	6.45	4.82	4.84	-0.44	-0.22	1.31	-1.54	1.11	-2.39	-2.16	5.31	1.33	-1.26
PRIMARY METALS.....	15.6	16.3	16.2	16.1	15.8	15.5	15.4	15.3	15.2	15.2	15.7	16.2	15.7	15.4
% CHG SAME QTR LAST YR.....	-7.13	-3.16	-4.53	-2.82	1.07	-4.90	-4.74	-4.97	-3.59	-1.93	1.73	-3.86	-2.89	-2.23
FABRICATED METALS.....	39.2	39.0	39.5	39.8	40.1	38.1	41.6	41.7	41.9	42.3	42.2	39.1	39.9	42.0
% CHG SAME QTR LAST YR.....	-0.84	-1.43	1.02	2.67	2.47	-2.31	5.32	4.69	4.40	11.01	1.44	-0.47	2.05	5.28
NONELECTRICAL MACHINERY.....	38.5	36.2	37.0	37.5	36.5	35.1	36.4	37.3	37.9	37.7	37.6	37.3	36.4	37.6
% CHG SAME QTR LAST YR.....	-2.86	-1.81	3.73	0.27	-5.20	-3.04	-1.71	-0.53	3.84	7.31	3.30	-1.30	-2.44	3.42
ELECTRICAL MACHINERY.....	35.2	34.9	34.9	34.8	35.2	36.0	37.1	37.5	38.6	38.9	39.1	35.2	35.7	38.5
% CHG SAME QTR LAST YR.....	7.20	-5.59	-5.76	-2.61	-0.19	3.06	6.11	7.96	9.76	8.06	5.49	-6.47	1.56	7.79
TRANSPORTATION EQUIPMENT.....	33.0	33.2	33.5	34.2	35.3	35.0	34.4	34.6	34.5	33.6	33.4	33.0	34.7	34.0
% CHG SAME QTR LAST YR.....	4.32	5.96	3.72	6.43	6.87	5.52	2.69	1.27	-2.27	-4.00	-2.81	4.55	5.36	-1.97
INSTRUMENTS.....	9.5	9.6	9.8	9.2	9.1	9.5	9.5	9.4	9.4	9.7	9.9	9.6	9.3	9.6
% CHG SAME QTR LAST YR.....	3.62	4.36	5.78	-3.50	-4.20	-0.70	-3.07	2.17	3.28	2.46	4.58	4.92	-2.86	3.13
MISCELLANEOUS.....	10.9	11.3	11.2	10.7	11.4	11.7	11.8	12.2	12.8	12.6	12.0	10.9	11.4	12.4
% CHG SAME QTR LAST YR.....	6.17	4.64	4.36	4.90	4.28	3.55	5.37	14.02	12.90	7.71	2.27	3.49	4.52	9.08

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 5: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	251.3	251.8	251.4	247.4	251.1	255.8	257.9	256.6	256.7	257.3	257.5	251.2	253.0	257.0
% CHG SAME QTR LAST YR.....	-1.08	-0.33	-0.42	-1.20	-0.08	1.60	2.59	3.73	2.26	0.57	-0.17	-0.62	0.73	1.57
FOOD.....	38.1	39.6	38.9	38.2	38.2	39.6	38.7	38.5	39.2	40.0	40.2	38.4	38.7	39.5
% CHG SAME QTR LAST YR.....	0.70	2.15	4.66	3.24	0.17	0.00	-0.68	0.70	2.70	1.18	3.97	2.10	0.65	2.13
TOBACCO.....	1.3	1.2	1.9	1.7	1.2	1.2	1.6	1.8	1.1	1.1	1.3	1.6	1.4	1.3
% CHG SAME QTR LAST YR.....	-11.36	5.88	23.91	-16.67	-7.69	-2.78	-14.04	8.00	-5.56	-8.57	-20.41	1.05	-11.46	-6.47
TEXTILES.....	22.9	23.1	23.8	23.7	23.9	24.1	24.3	24.1	23.6	22.4	22.1	23.1	24.0	23.0
% CHG SAME QTR LAST YR.....	-3.65	1.76	4.09	4.41	4.22	4.33	2.24	1.55	-1.26	-7.19	-8.92	-0.04	3.79	-3.99
APPAREL.....	64.1	62.7	63.7	62.2	64.0	65.1	67.4	66.6	65.0	64.0	64.1	63.8	64.7	64.9
% CHG SAME QTR LAST YR.....	-1.99	-2.89	-3.34	-3.67	-0.21	3.83	5.81	7.08	1.51	-1.74	-4.99	-2.45	1.41	0.34
PAPER.....	18.6	19.0	18.2	17.9	18.9	19.4	19.3	18.9	19.6	20.0	19.7	18.3	18.9	19.5
% CHG SAME QTR LAST YR.....	4.10	3.45	0.74	1.32	1.61	2.28	6.24	5.60	3.53	2.92	1.90	2.75	2.86	3.45
PRINTING AND PUBLISHING.....	32.9	33.0	33.3	33.4	33.8	34.3	34.2	34.6	35.2	35.5	35.8	32.9	33.9	35.3
% CHG SAME QTR LAST YR.....	3.90	4.43	3.84	3.51	2.84	3.73	2.70	3.5[illegible]	4.24	3.60	4.48	4.06	3.19	3.98
CHEMICALS.....	37.9	37.8	37.4	37.4	37.4	37.5	37.3	37.7	37.7	38.7	38.3	37.9	37.4	38.1
% CHG SAME QTR LAST YR.....	-6.35	-5.26	-3.61	-2.60	-1.23	-0.88	-0.27	0.80	0.89	3.20	2.59	-5.31	-1.25	1.87
PETROLEUM REFINING.....	0.9	0.9	0.9	0.8	0.9	1.0	0.9	0.8	0.8	0.8	0.8	0.9	0.9	0.8
% CHG SAME QTR LAST YR.....	8.33	7.69	3.85	0.00	7.69	7.14	0.00	-4.00	-14.29	-20.00	-11.11	7.07	3.77	-12.73
RUBBER AND PLASTICS.....	24.5	24.2	23.7	23.2	23.6	24.1	24.7	24.4	25.0	25.5	25.3	24.2	23.9	25.0
% CHG SAME QTR LAST YR.....	2.51	0.98	-3.79	-5.18	-3.54	-0.14	4.37	5.18	6.07	5.53	2.56	0.83	-1.17	4.81
LEATHER.....	10.1	10.3	9.6	8.9	9.2	9.6	9.4	9.3	9.5	9.4	9.9	10.1	9.3	9.5
% CHG SAME QTR LAST YR.....	-6.75	-4.64	-9.15	-15.24	-9.54	-6.82	-1.74	4.49	3.27	-1.74	5.30	-6.32	-8.48	2.79

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 6: TENNESSEE NONAGRICULTURAL EMPLOYMENT
THOUSANDS OF SEASONALLY ADJUSTED JOBS

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	1918.7	1938.4	1955.5	1978.8	1999.1	2022.1	2046.2	2059.7	2066.6	2063.7	2073.7	1929.8	2011.5	2065.9
% CHG PREV QTR SAAR	2.57	4.17	3.58	4.85	4.17	4.68	4.85	2.67	1.33	-0.55	1.95	3.32	4.24	2.70
% CHG SAME QTR LAST YR	2.98	3.37	3.30	3.79	4.19	4.32	4.64	4.09	3.38	2.06	1.35	3.32	4.24	2.70
MINING	6.9	7.0	7.0	6.9	6.8	6.7	6.7	6.8	6.9	6.9	6.5	7.2	6.8	6.8
% CHG PREV QTR SAAR	-37.56	4.81	0.33	-2.64	-9.24	-4.77	2.32	3.37	5.42	-0.72	-21.01	-7.54	-5.21	-0.51
% CHG SAME QTR LAST YR	-10.92	-10.06	-9.28	-10.58	-1.82	-4.15	-3.67	-2.22	1.51	2.58	-3.85	-7.54	-5.21	-0.51
CONSTRUCTION	90.1	89.8	90.1	94.1	94.6	95.5	96.7	95.6	95.4	93.4	93.7	90.0	95.2	94.5
% CHG PREV QTR SAAR	0.12	-1.65	1.51	18.84	2.04	3.92	5.43	-4.59	-1.02	-8.00	1.07	5.28	5.75	-0.74
% CHG SAME QTR LAST YR	5.03	3.70	0.81	4.40	4.89	6.35	7.36	1.62	0.85	-2.17	-3.20	5.28	5.75	-0.74
MANUFACTURING	490.2	490.0	491.3	491.8	494.1	497.8	506.2	508.3	507.8	507.5	509.2	490.5	497.5	508.2
% CHG PREV QTR SAAR	-0.40	-0.20	1.12	0.38	1.86	3.08	6.89	1.72	-0.44	-0.20	1.34	-0.39	1.41	2.16
% CHG SAME QTR LAST YR	-0.99	0.09	0.35	0.22	0.79	1.61	3.02	3.37	2.78	1.95	0.60	-0.39	1.41	2.16
DURABLE GOODS	238.8	239.5	240.8	242.5	242.8	243.2	249.2	249.9	250.7	251.5	252.7	239.3	244.4	251.2
% CHG PREV QTR SAAR	0.99	1.14	2.10	2.88	0.52	0.66	10.29	1.07	1.35	1.18	1.94	-0.14	2.13	2.77
% CHG SAME QTR LAST YR	-0.90	0.43	1.22	1.78	1.66	1.54	3.52	3.06	3.27	3.40	1.39	-0.14	2.13	2.77
NONDURABLE GOODS	251.4	250.5	250.6	249.3	251.3	254.6	257.0	258.5	257.1	256.1	256.6	251.2	253.0	257.0
% CHG PREV QTR SAAR	-1.71	-1.46	0.19	-1.99	3.17	5.47	3.71	2.35	-2.16	-1.53	0.76	-0.62	0.73	1.58
% CHG SAME QTR LAST YR	-1.07	-0.23	-0.48	-1.25	-0.04	1.67	2.55	3.67	2.30	0.56	-0.16	-0.62	0.73	1.58
TRADE	449.5	453.6	460.4	467.8	473.6	480.8	486.4	488.4	489.4	488.0	487.0	452.0	477.2	488.2
% CHG PREV QTR SAAR	4.62	3.75	6.12	6.60	4.98	6.26	4.73	1.70	0.80	-1.16	-0.83	3.85	5.57	2.32
% CHG SAME QTR LAST YR	3.95	3.47	3.96	5.27	5.36	5.99	5.64	4.40	3.35	1.50	0.12	3.85	5.57	2.32
SERVICES	381.7	388.5	392.5	398.0	404.8	412.8	419.9	426.4	429.5	429.1	434.9	384.6	408.9	430.0
% CHG PREV QTR SAAR	6.22	7.33	4.18	5.73	7.01	8.15	7.12	6.27	3.02	-0.38	5.45	6.80	6.30	5.17
% CHG SAME QTR LAST YR	6.78	7.32	6.27	5.86	6.06	6.26	7.00	7.13	6.12	3.96	3.56	6.80	6.30	5.17
FIN,INS,REAL EST	94.1	96.3	98.6	100.1	101.4	101.8	102.4	102.9	103.4	104.2	104.9	95.4	101.4	103.9
% CHG PREV QTR SAAR	7.15	9.50	9.95	6.04	5.46	1.74	2.21	1.92	2.13	3.03	2.80	6.68	6.33	2.40
% CHG SAME QTR LAST YR	5.71	6.91	8.51	8.15	7.72	5.76	3.85	2.82	2.00	2.32	2.47	6.68	6.33	2.40
TRANS,COMM,PUB UTIL	96.3	98.4	100.0	101.4	103.2	104.3	104.8	107.4	108.7	109.4	109.6	97.6	103.4	108.8
% CHG PREV QTR SAAR	2.35	9.36	6.50	5.85	7.07	4.31	2.20	10.26	4.70	2.80	0.73	4.92	5.98	5.18
% CHG SAME QTR LAST YR	3.98	5.36	4.98	5.99	7.19	5.93	4.84	5.92	5.32	4.94	4.56	4.92	5.98	5.18
GOVERNMENT	309.9	314.8	315.5	318.6	320.8	322.4	323.0	323.9	325.5	325.2	328.0	312.4	321.2	325.6
% CHG PREV QTR SAAR	0.71	6.49	0.95	3.97	2.72	2.04	0.71	1.11	2.01	-0.41	3.49	2.72	2.82	1.38
% CHG SAME QTR LAST YR	2.25	2.42	2.50	3.00	3.51	2.42	2.35	1.64	1.47	0.85	1.54	2.72	2.82	1.38
FEDERAL,CIVILIAN	60.7	61.8	62.4	63.0	62.8	63.1	64.7	65.2	64.8	62.8	61.3	61.6	63.4	63.5
% CHG PREV QTR SAAR	-5.43	7.43	4.38	3.40	-1.16	2.26	10.57	2.72	-2.17	-11.68	-9.65	0.47	2.92	0.19
% CHG SAME QTR LAST YR	-1.03	-0.21	1.72	2.33	3.47	2.20	3.68	3.51	3.25	-0.47	-5.37	0.47	2.92	0.19
STATE AND LOCAL	249.2	253.0	253.1	255.7	258.0	259.3	258.2	258.7	260.7	262.3	266.7	250.8	257.8	262.1
% CHG PREV QTR SAAR	2.27	6.26	0.13	4.11	3.70	1.99	-1.59	0.72	3.08	2.56	6.84	3.28	2.79	1.67
% CHG SAME QTR LAST YR	3.09	3.08	2.70	3.17	3.52	2.47	2.03	1.18	1.03	1.17	3.27	3.28	2.79	1.67

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 7: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
SEASONALLY ADJUSTED
(THOUSANDS OF JOBS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	238.8	239.5	240.8	242.5	242.8	243.2	249.2	249.9	250.7	251.5	252.7	239.3	244.4	251.2
% CHG PREV QTR SAAR	0.99	1.14	2.10	2.88	0.52	0.66	10.29	1.07	1.35	1.18	1.94	-0.14	2.13	2.77
% CHG SAME QTR LAST YR	-0.90	0.43	1.22	1.78	1.66	1.54	3.52	3.06	3.27	3.40	1.39	-0.14	2.13	2.77
LUMBER AND WOOD	18.4	18.7	18.9	20.5	20.8	21.6	22.2	21.0	20.1	19.4	19.8	18.6	21.3	20.1
% CHG PREV QTR SAAR	4.07	4.80	5.80	37.75	5.02	16.72	11.64	-19.36	-16.76	-12.15	6.79	1.40	14.43	-5.57
% CHG SAME QTR LAST YR	-0.75	2.18	5.46	12.28	12.54	15.61	17.17	2.49	-3.29	-9.92	-10.92	1.40	14.43	-5.57
FURNITURE AND FIXTURES	24.4	24.6	24.3	24.2	24.6	24.9	25.2	25.8	26.0	26.5	27.6	24.5	24.7	26.5
% CHG PREV QTR SAAR	-3.20	3.96	-4.86	-1.78	6.57	5.17	5.32	8.80	3.04	8.24	18.31	0.64	1.06	6.97
% CHG SAME QTR LAST YR	0.01	2.38	0.45	-1.52	0.87	1.16	3.77	6.45	5.56	6.32	9.46	0.64	1.06	6.97
STONE,CLAY AND GLASS	15.1	15.3	15.1	15.4	15.0	15.2	15.4	15.1	15.2	14.9	15.0	15.1	15.3	15.1
% CHG PREV QTR SAAR	10.78	4.42	-2.99	6.86	-8.89	5.05	3.26	-5.45	2.13	-8.88	4.22	5.28	1.35	-1.27
% CHG SAME QTR LAST YR	6.85	6.48	4.84	4.65	-0.35	-0.19	1.38	-1.68	1.17	-2.37	-2.14	5.28	1.35	-1.27
PRIMARY METALS	15.6	16.5	16.1	16.0	15.8	15.7	15.3	15.2	15.3	15.3	15.6	16.2	15.7	15.4
% CHG PREV QTR SAAR	-18.89	22.81	-9.11	-1.71	-4.05	-4.85	-8.48	-2.44	2.11	1.25	6.15	-3.87	-2.88	-2.22
% CHG SAME QTR LAST YR	-6.82	-3.20	-4.67	-2.88	1.29	-4.97	-4.80	-4.98	-3.49	-1.98	1.72	-3.87	-2.88	-2.22
FABRICATED METALS	39.2	39.0	39.3	39.9	40.2	38.1	41.5	41.7	42.0	42.4	42.1	39.1	39.9	42.0
% CHG PREV QTR SAAR	1.99	-2.85	3.93	6.01	2.99	-19.10	40.14	1.62	3.24	3.78	-2.47	-0.48	2.02	5.26
% CHG SAME QTR LAST YR	-0.88	-1.18	1.26	2.22	2.47	-2.12	5.48	4.37	4.43	11.14	1.51	-0.48	2.02	5.26
NONELECTRICAL MACHINERY	37.7	36.9	37.4	37.0	35.8	35.8	36.7	36.8	37.3	38.4	37.9	37.3	36.4	37.6
% CHG PREV QTR SAAR	7.78	-8.08	5.86	-4.25	-12.44	-0.12	10.69	0.59	5.56	12.92	-5.48	-1.29	-2.44	3.45
% CHG SAME QTR LAST YR	-2.73	-1.60	3.52	0.10	-4.96	-2.97	-1.88	-0.66	4.09	7.33	3.18	-1.29	-2.44	3.45
ELECTRICAL MACHINERY	35.2	34.9	34.8	35.0	35.2	35.9	36.9	37.7	38.6	38.9	38.9	35.2	35.7	38.5
% CHG PREV QTR SAAR	-8.28	-3.56	-1.31	2.51	2.01	9.39	10.89	9.50	9.39	2.71	0.66	-6.47	1.55	7.78
% CHG SAME QTR LAST YR	-7.11	-5.52	-5.76	-2.74	-0.12	3.08	6.13	7.89	9.79	8.07	5.49	-6.47	1.55	7.78
TRANSPORTATION EQUIPMENT	32.7	33.2	33.8	34.2	34.9	35.0	34.8	34.6	34.1	33.7	33.8	33.0	34.7	34.0
% CHG PREV QTR SAAR	6.79	5.94	7.75	4.81	8.49	1.47	-2.99	-2.09	-5.44	-5.24	1.79	4.55	5.35	-1.99
% CHG SAME QTR LAST YR	4.16	6.08	3.86	6.32	6.74	5.60	2.86	1.12	-2.29	-3.95	-2.79	4.55	5.35	-1.99
INSTRUMENTS	9.6	9.5	9.7	9.3	9.2	9.4	9.4	9.4	9.5	9.7	9.8	9.6	9.3	9.6
% CHG PREV QTR SAAR	-0.92	-1.96	9.02	-18.01	-2.79	11.28	-0.94	1.54	2.79	6.09	7.60	4.93	-2.86	3.13
% CHG SAME QTR LAST YR	3.88	4.12	5.67	-3.47	-3.93	-0.84	-3.19	2.13	3.57	2.34	4.48	4.93	-2.86	3.13
MISCELLANEOUS	10.8	11.0	11.2	11.0	11.3	11.4	11.8	12.5	12.7	12.3	12.1	10.9	11.4	12.4
% CHG PREV QTR SAAR	17.50	7.33	6.27	-8.71	11.27	6.93	14.38	24.84	4.96	-9.87	-7.03	3.46	4.53	9.09
% CHG SAME QTR LAST YR	5.65	4.67	4.59	5.17	3.75	3.65	5.57	14.17	12.51	7.81	2.36	3.46	4.53	9.09

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 8: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
SEASONALLY ADJUSTED
(THOUSANDS OF JOBS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	251.4	250.5	250.6	249.3	251.3	254.6	257.0	258.5	257.1	256.1	256.6	251.2	253.0	257.0
% CHG PREV QTR SAAR.....	-1.71	-1.46	0.19	-1.99	3.17	5.47	3.71	2.35	-2.16	-1.53	0.76	-0.62	0.73	1.58
% CHG SAME QTR LAST YR.....	-1.07	-0.23	-0.48	-1.25	-0.04	1.67	2.55	3.67	2.30	0.56	-0.16	-0.62	0.73	1.58
FOOD.....	38.4	38.7	38.9	38.9	38.4	38.7	38.7	39.2	39.5	39.2	40.2	38.4	38.7	39.5
% CHG PREV QTR SAAR.....	7.00	3.02	2.99	-0.24	-4.99	2.76	-0.10	5.17	3.11	-3.10	11.14	2.09	0.66	2.13
% CHG SAME QTR LAST YR.....	0.66	2.24	4.70	3.16	0.14	0.08	-0.68	0.64	2.72	1.22	3.95	2.09	0.66	2.13
TOBACCO.....	1.5	1.5	1.8	1.3	1.4	1.5	1.5	1.4	1.4	1.4	1.2	1.6	1.4	1.3
% CHG PREV QTR SAAR.....	1.13	-5.88	81.73	-71.78	52.09	14.78	7.98	-27.00	-10.53	-1.33	-38.85	1.13	-10.47	-7.16
% CHG SAME QTR LAST YR.....	-11.33	6.22	23.11	-16.42	-7.44	-2.73	-14.60	8.31	-5.15	-8.67	-20.77	1.13	-10.47	-7.16
TEXTILES.....	22.9	23.1	23.7	23.7	23.8	24.2	24.2	24.1	23.5	22.5	22.1	23.1	24.0	23.0
% CHG PREV QTR SAAR.....	1.89	4.97	9.85	0.65	1.50	6.41	0.41	-2.40	-8.86	-16.59	-7.29	-0.03	3.79	-4.00
% CHG SAME QTR LAST YR.....	-3.65	1.99	4.01	4.28	4.18	4.54	2.22	1.43	-1.26	-7.10	-8.93	-0.03	3.79	-4.00
APPAREL.....	64.0	62.9	63.1	62.6	64.0	65.4	66.6	66.9	65.1	64.3	63.3	63.8	64.7	64.9
% CHG PREV QTR SAAR.....	-6.32	-6.71	0.69	-3.10	9.76	9.14	7.49	1.49	-10.28	-4.57	-6.50	-2.45	1.38	0.35
% CHG SAME QTR LAST YR.....	-1.86	-2.64	-3.47	-3.91	-0.03	3.98	5.69	6.92	1.66	-1.69	-5.06	-2.45	1.38	0.35
PAPER.....	18.5	18.5	18.2	18.4	18.8	18.9	19.3	19.4	19.4	19.5	19.7	18.3	18.9	19.5
% CHG PREV QTR SAAR.....	6.80	0.14	-6.52	5.54	7.51	3.37	8.92	2.40	-0.38	0.98	4.97	2.76	2.87	3.46
% CHG SAME QTR LAST YR.....	3.93	3.57	0.72	1.35	1.52	2.33	6.32	5.52	3.52	2.92	1.97	2.76	2.87	3.46
PRINTING AND PUBLISHING.....	32.8	33.1	33.3	33.5	33.7	34.3	34.2	34.7	35.1	35.5	35.8	32.9	33.9	35.3
% CHG PREV QTR SAAR.....	4.54	3.60	2.84	2.86	2.11	7.05	-0.79	5.98	5.01	4.21	2.90	4.06	3.19	3.97
% CHG SAME QTR LAST YR.....	3.86	4.43	3.91	3.46	2.85	3.70	2.77	3.54	4.27	3.57	4.52	4.06	3.19	3.97
CHEMICALS.....	37.8	37.6	37.6	37.5	37.4	37.3	37.5	37.8	37.7	38.5	38.4	37.9	37.4	38.1
% CHG PREV QTR SAAR.....	-6.67	-2.39	-0.39	-1.03	-1.07	-0.96	2.01	3.28	-0.78	8.62	-0.53	-5.31	-1.26	1.87
% CHG SAME QTR LAST YR.....	-6.32	-5.28	-3.57	-2.65	-1.22	-0.86	-0.27	0.80	0.87	3.23	2.58	-5.31	-1.26	1.87
PETROLEUM REFINING.....	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.8	0.8	0.9	0.9	0.8
% CHG PREV QTR SAAR.....	-4.89	6.98	-4.37	3.91	24.20	6.03	-26.28	-10.90	-23.80	-18.73	13.96	7.16	3.66	-12.49
% CHG SAME QTR LAST YR.....	7.79	7.24	4.45	0.27	7.19	6.95	0.22	-3.56	-14.65	-20.14	-10.95	7.16	3.66	-12.49
RUBBER AND PLASTICS.....	24.4	24.1	23.6	23.4	23.5	24.0	24.6	24.6	25.0	25.3	25.2	24.2	23.9	25.0
% CHG PREV QTR SAAR.....	-3.82	-5.22	-8.14	-2.80	2.40	8.35	9.85	0.68	5.93	5.50	-1.78	0.83	-1.17	4.82
% CHG SAME QTR LAST YR.....	2.56	0.91	-3.92	-5.02	-3.52	-0.23	4.33	5.25	6.14	5.44	2.53	0.83	-1.17	4.82
LEATHER.....	10.2	10.0	9.6	9.1	9.2	9.3	9.4	9.5	9.5	9.2	9.9	10.1	9.3	9.5
% CHG PREV QTR SAAR.....	-18.70	-4.79	-16.38	-20.14	6.40	5.73	2.81	3.66	1.69	-14.58	36.24	-6.32	-8.53	2.85
% CHG SAME QTR LAST YR.....	-6.66	-4.58	-9.38	-15.21	-9.31	-6.90	-1.97	4.64	3.46	-1.91	5.24	-6.32	-8.53	2.85

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 9: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORICAL - DATA										ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS.....	7.85	7.96	8.02	7.93	7.82	7.78	7.82	7.70	7.58	7.53	7.56	7.91	7.83	7.59
% CHG SAME QTR LAST YR.....	2.46	2.71	2.68	1.21	-0.47	-2.28	-2.47	-2.80	-3.04	-3.13	-3.28	1.96	-1.02	-3.06
LUMBER AND WOOD.....	5.15	5.11	5.07	5.11	5.12	5.12	5.11	5.05	5.10	5.11	5.05	5.09	5.12	5.08
% CHG SAME QTR LAST YR.....	1.92	0.62	0.11	1.26	-0.66	0.28	0.91	-1.12	-0.38	-0.29	-1.24	0.76	0.44	-0.76
FURNITURE AND FIXTURES.....	6.43	6.38	6.45	6.49	6.41	6.03	5.82	5.87	6.03	5.98	6.14	6.41	6.19	6.01
% CHG SAME QTR LAST YR.....	2.08	0.86	-0.19	1.57	-0.30	-5.46	-9.81	-9.53	-5.85	-0.89	5.66	1.00	-3.51	-2.90
STONE,CLAY AND GLASS.....	9.69	9.89	9.67	9.85	9.53	9.45	9.76	9.96	9.82	9.48	9.82	9.77	9.65	9.77
% CHG SAME QTR LAST YR.....	3.26	2.50	-1.48	0.42	-1.70	-4.45	0.93	1.17	3.04	0.36	0.55	1.20	-1.21	1.27
PRIMARY METALS.....	9.31	9.32	9.53	9.52	9.59	10.09	9.79	9.33	9.29	9.23	9.11	9.47	9.75	9.24
% CHG SAME QTR LAST YR.....	-4.11	-2.54	-1.23	-2.03	2.94	8.27	2.77	-2.03	-3.12	-8.53	-7.00	-1.53	2.93	-5.23
FABRICATED METALS.....	8.10	8.18	8.18	8.12	8.00	7.52	7.99	8.03	7.97	8.01	7.86	8.18	7.91	7.97
% CHG SAME QTR LAST YR.....	2.08	0.17	-0.55	-1.75	-1.22	-8.06	-2.32	-1.05	-0.36	6.45	-1.61	0.43	-3.34	0.77
MACHINERY.....	7.57	7.54	7.64	7.59	7.58	7.56	7.56	7.54	7.43	7.35	7.40	7.55	7.57	7.43
% CHG SAME QTR LAST YR.....	2.76	2.13	3.64	1.87	0.13	0.25	-1.06	-0.63	-2.02	-2.87	-2.18	2.51	0.29	-1.92
INSTRUMENTS.....	7.41	7.39	7.40	7.50	7.44	7.58	7.43	7.66	7.59	7.52	7.36	7.38	7.49	7.53
% CHG SAME QTR LAST YR.....	4.12	1.19	1.09	2.55	0.46	2.56	0.32	2.21	1.95	-0.83	-0.84	1.86	1.47	0.62

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 10: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	7.05	7.09	7.07	6.89	6.81	6.82	6.71	6.77	6.76	6.77	6.80	7.07	6.81	6.77
% CHG SAME QTR LAST YR.....	0.44	-0.27	-0.30	-2.45	-3.31	-3.76	-5.08	-1.83	-0.87	-0.67	1.27	-0.12	-3.65	-0.54
FOOD.....	7.28	7.21	7.25	7.21	7.01	6.89	6.94	6.85	6.85	6.79	6.74	7.25	7.01	6.81
% CHG SAME QTR LAST YR.....	-1.19	-2.51	2.60	-0.88	-3.63	-4.39	-4.25	-5.09	-2.34	-1.47	-2.84	-0.42	-3.28	-2.96
TEXTILES.....	5.75	5.76	5.70	5.68	5.64	5.69	5.64	5.63	5.71	5.69	5.72	5.73	5.67	5.69
% CHG SAME QTR LAST YR.....	2.09	1.60	-0.27	-0.85	-1.91	-1.11	-0.94	-0.94	1.21	0.02	1.28	1.31	-1.21	0.39
APPAREL.....	4.62	4.60	4.61	4.65	4.59	4.51	4.48	4.53	4.54	4.48	4.46	4.62	4.56	4.50
% CHG SAME QTR LAST YR.....	0.40	0.31	-1.03	-0.23	-0.73	-2.11	-2.73	-2.48	-1.09	-0.48	-0.42	-0.16	-1.44	-1.13
PAPER.....	9.32	9.32	9.40	9.13	9.19	8.93	8.86	9.28	8.94	8.78	8.86	9.28	9.03	8.97
% CHG SAME QTR LAST YR.....	2.46	2.80	3.94	0.52	-1.36	-4.19	-5.74	1.63	-2.74	-1.68	-0.03	1.80	-2.72	-0.71
CHEMICALS.....	9.46	9.41	9.24	9.12	9.18	9.31	9.16	9.09	9.14	9.16	9.35	9.46	9.19	9.19
% CHG SAME QTR LAST YR.....	2.03	-1.29	-3.65	-6.28	-2.95	-1.08	-0.87	-0.36	-0.51	-1.59	2.12	0.41	-2.83	-0.09
RUBBER.....	8.23	8.33	8.46	8.05	8.12	8.10	7.95	8.13	8.07	8.15	8.36	8.33	8.05	8.18
% CHG SAME QTR LAST YR.....	-0.72	1.10	0.97	-2.82	-1.32	-2.82	-6.03	0.94	-0.61	0.70	5.20	-0.04	-3.26	1.54
LEATHER.....	5.23	5.21	5.16	5.27	5.27	5.16	4.92	5.00	4.92	4.84	4.85	5.21	5.16	4.90
% CHG SAME QTR LAST YR.....	-0.74	1.09	2.35	1.04	0.72	-0.94	-4.82	-5.13	-6.65	-6.21	-1.30	-0.06	-0.99	-4.88

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 11: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS.....	7.89	7.98	7.97	7.91	7.86	7.80	7.77	7.69	7.62	7.55	7.51	7.91	7.83	7.59
% CHG PREV QTR SAAR.....	4.27	4.70	-0.44	-3.22	-2.52	-3.00	-1.39	-4.07	-3.55	-3.59	-1.98	1.96	-1.01	-3.05
% CHG SAME QTR LAST YR.....	2.54	2.69	2.56	1.28	-0.42	-2.30	-2.54	-2.75	-3.01	-3.16	-3.30	1.96	-1.01	-3.05
LUMBER AND WOOD.....	5.14	5.11	5.06	5.13	5.11	5.11	5.11	5.07	5.09	5.10	5.04	5.09	5.11	5.08
% CHG PREV QTR SAAR.....	6.29	-2.59	-3.43	5.60	-1.76	0.43	-0.46	-2.62	1.47	0.24	-3.92	0.77	0.45	-0.75
% CHG SAME QTR LAST YR.....	1.96	0.41	0.13	1.37	-0.61	0.16	0.91	-1.11	-0.31	-0.35	-1.23	0.77	0.45	-0.75
FURNITURE AND FIXTURES.....	6.39	6.45	6.44	6.48	6.36	6.10	5.82	5.87	5.97	6.04	6.15	6.41	6.19	6.01
% CHG PREV QTR SAAR.....	0.89	3.43	-0.29	2.66	-7.63	-15.41	-17.00	3.41	7.45	4.64	7.69	1.00	-3.52	-2.89
% CHG SAME QTR LAST YR.....	1.83	0.92	-0.08	1.67	-0.55	-5.43	-9.67	-9.50	-6.02	-0.89	5.78	1.00	-3.52	-2.89
STONE,CLAY AND GLASS.....	9.72	10.01	9.66	9.70	9.58	9.57	9.75	9.79	9.88	9.61	9.81	9.77	9.65	9.77
% CHG PREV QTR SAAR.....	1.65	12.13	-13.13	1.76	-5.08	-0.32	7.97	1.51	3.63	-10.53	8.80	1.22	-1.21	1.26
% CHG SAME QTR LAST YR.....	3.64	2.53	-1.57	0.19	-1.51	-4.37	0.97	0.91	3.15	0.40	0.59	1.22	-1.21	1.26
PRIMARY METALS.....	9.36	9.29	9.45	9.58	9.66	10.04	9.71	9.38	9.37	9.16	9.03	9.47	9.75	9.24
% CHG PREV QTR SAAR.....	-16.25	-2.70	6.66	5.87	3.12	16.84	-12.34	-12.88	-0.38	-8.82	-5.38	-1.53	2.92	-5.22
% CHG SAME QTR LAST YR.....	-3.88	-2.71	-1.22	-2.06	3.17	8.00	2.83	-2.06	-2.90	-8.74	-6.98	-1.53	2.92	-5.22
FABRICATED METALS.....	8.18	8.21	8.15	8.04	8.08	7.54	7.97	7.97	8.05	8.02	7.84	8.18	7.91	7.97
% CHG PREV QTR SAAR.....	-0.52	1.61	-2.90	-5.06	1.80	-24.17	24.50	0.02	4.07	-1.04	-8.90	0.43	-3.34	0.77
% CHG SAME QTR LAST YR.....	2.26	0.05	-0.51	-1.75	-1.18	-8.15	-2.26	-0.98	-0.43	6.42	-1.58	0.43	-3.34	0.77
MACHINERY.....	7.56	7.57	7.63	7.58	7.57	7.59	7.55	7.54	7.42	7.37	7.38	7.55	7.57	7.43
% CHG PREV QTR SAAR.....	6.58	0.44	3.51	-2.67	-0.54	0.91	-2.25	-0.43	-6.12	-2.52	0.31	2.51	0.29	-1.92
% CHG SAME QTR LAST YR.....	2.79	2.16	3.55	1.91	0.16	0.28	-1.15	-0.58	-2.01	-2.85	-2.22	2.51	0.29	-1.92
INSTRUMENTS.....	7.42	7.40	7.47	7.42	7.45	7.58	7.49	7.60	7.58	7.52	7.43	7.38	7.49	7.53
% CHG PREV QTR SAAR.....	11.35	-0.80	3.34	-2.26	1.26	7.56	-4.62	5.74	-0.83	-3.58	-4.20	1.86	1.47	0.62
% CHG SAME QTR LAST YR.....	4.08	0.99	1.13	2.77	0.36	2.41	0.38	2.37	1.84	-0.90	-0.79	1.86	1.47	0.62

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 12: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	7.08	7.07	7.05	6.90	6.85	6.80	6.69	6.78	6.78	6.76	6.78	7.07	6.81	6.77
% CHG PREV QTR SAAR.....	0.93	-0.59	-1.26	-8.28	-3.08	-2.39	-6.48	5.36	0.12	-1.40	1.19	-0.11	-3.65	-0.53
% CHG SAME QTR LAST YR.....	0.47	-0.36	-0.30	-2.37	-3.35	-3.79	-5.09	-1.74	-0.94	-0.69	1.29	-0.11	-3.65	-0.53
FOOD.....	7.26	7.23	7.25	7.20	7.00	6.92	6.94	6.83	6.84	6.82	6.74	7.25	7.01	6.81
% CHG PREV QTR SAAR.....	-0.32	-1.67	1.05	-2.71	-10.65	-4.46	0.87	-5.92	0.51	-1.08	-4.82	-0.41	-3.28	-2.95
% CHG SAME QTR LAST YR.....	-1.12	-2.42	2.49	-0.93	-3.60	-4.29	-4.33	-5.13	-2.30	-1.44	-2.86	-0.41	-3.28	-2.95
TEXTILES.....	5.76	5.75	5.70	5.69	5.65	5.68	5.65	5.63	5.72	5.68	5.72	5.73	5.67	5.69
% CHG PREV QTR SAAR.....	2.17	-1.26	-3.48	-0.63	-2.45	2.02	-2.39	-0.77	6.11	-2.81	3.04	1.30	-1.21	0.39
% CHG SAME QTR LAST YR.....	2.07	1.54	-0.20	-0.82	-1.96	-1.16	-0.88	-0.92	1.19	-0.03	1.33	1.30	-1.21	0.39
APPAREL.....	4.62	4.63	4.62	4.61	4.58	4.53	4.50	4.50	4.52	4.51	4.48	4.62	4.56	4.50
% CHG PREV QTR SAAR.....	0.07	0.97	-0.44	-1.14	-2.73	-4.13	-2.72	-0.04	2.22	-1.28	-2.46	-0.16	-1.45	-1.13
% CHG SAME QTR LAST YR.....	0.32	0.26	-0.98	-0.14	-0.84	-2.12	-2.68	-2.41	-1.20	-0.47	-0.40	-0.16	-1.45	-1.13
PAPER.....	9.31	9.39	9.40	9.09	9.17	9.00	8.87	9.23	8.91	8.85	8.88	9.29	9.03	8.97
% CHG PREV QTR SAAR.....	11.79	3.67	0.46	-12.70	3.76	-7.39	-5.33	16.90	-12.91	-2.95	1.39	1.81	-2.74	-0.72
% CHG SAME QTR LAST YR.....	2.33	2.79	4.17	0.41	-1.45	-4.19	-5.60	1.55	-2.80	-1.66	0.04	1.81	-2.74	-0.72
CHEMICALS.....	9.52	9.35	9.20	9.17	9.23	9.26	9.12	9.14	9.17	9.11	9.32	9.46	9.19	9.19
% CHG PREV QTR SAAR.....	-10.44	-6.82	-6.24	-1.44	2.58	1.28	-5.59	0.66	1.34	-2.56	9.60	0.42	-2.85	-0.09
% CHG SAME QTR LAST YR.....	2.00	-1.25	-3.60	-6.29	-3.06	-1.01	-0.84	-0.32	-0.62	-1.58	2.16	0.42	-2.85	-0.09
RUBBER AND PLASTICS.....	8.28	8.38	8.36	8.06	8.17	8.13	7.85	8.15	8.11	8.18	8.26	8.32	8.05	8.18
% CHG PREV QTR SAAR.....	-0.19	4.94	-0.89	-13.55	5.41	-1.72	-13.08	16.19	-1.91	3.37	4.06	-0.04	-3.26	1.54
% CHG SAME QTR LAST YR.....	-0.72	0.93	0.98	-2.67	-1.33	-2.94	-6.07	1.14	-0.67	0.59	5.22	-0.04	-3.26	1.54
LEATHER.....	5.19	5.23	5.25	5.21	5.22	5.18	5.00	4.95	4.88	4.86	4.94	5.21	5.15	4.90
% CHG PREV QTR SAAR.....	1.63	3.58	1.34	-2.59	0.76	-3.43	-13.18	-4.14	-5.56	-1.66	6.70	-0.06	-1.03	-4.86
% CHG SAME QTR LAST YR.....	-0.75	1.00	2.52	0.96	0.75	-1.00	-4.76	-5.14	-6.66	-6.24	-1.28	-0.06	-1.03	-4.86

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 13: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	8.91	9.13	9.28	9.32	9.32	9.37	9.52	9.44	9.39	9.42	9.57	9.05	9.38	9.45
% CHG SAME QTR LAST YR	4.58	5.19	5.13	4.95	4.53	2.67	2.59	1.25	0.79	0.57	0.45	4.45	3.66	0.76
LUMBER AND WOOD	5.85	5.86	5.87	6.01	6.10	6.17	6.23	6.19	6.32	6.39	6.39	5.82	6.13	6.32
% CHG SAME QTR LAST YR	4.03	3.05	2.50	5.01	4.33	5.35	6.14	3.00	3.55	3.51	2.57	3.22	5.21	3.16
FURNITURE AND FIXTURES	7.30	7.32	7.47	7.64	7.64	7.27	7.08	7.20	7.48	7.48	7.77	7.33	7.41	7.48
% CHG SAME QTR LAST YR	4.19	3.29	2.19	5.33	4.71	-0.68	-5.13	-5.76	-2.14	2.89	9.74	3.46	1.01	1.00
STONE,CLAY AND GLASS	11.00	11.34	11.20	11.58	11.36	11.38	11.89	12.20	12.17	11.86	12.42	11.17	11.55	12.16
% CHG SAME QTR LAST YR	5.40	4.97	0.87	4.14	3.24	0.38	6.16	5.38	7.10	4.19	4.43	3.67	3.47	5.27
PRIMARY METALS	10.57	10.69	11.04	11.19	11.43	12.16	11.93	11.42	11.51	11.55	11.52	10.83	11.68	11.50
% CHG SAME QTR LAST YR	-2.13	-0.19	1.13	1.60	8.11	13.75	8.09	2.05	0.70	-5.04	-3.41	0.87	7.84	-1.52
FABRICATED METALS	9.19	9.39	9.47	9.55	9.53	9.07	9.73	9.84	9.87	10.02	9.95	9.35	9.47	9.92
% CHG SAME QTR LAST YR	4.19	2.59	1.83	1.89	3.74	-3.41	2.74	3.07	3.57	10.51	2.19	2.88	1.23	4.75
MACHINERY	8.59	8.65	8.85	8.92	9.04	9.11	9.21	9.23	9.20	9.19	9.36	8.63	9.07	9.25
% CHG SAME QTR LAST YR	4.88	4.59	6.12	5.65	5.16	5.32	4.07	3.51	1.84	0.84	1.59	5.02	5.04	1.94
INSTRUMENTS	8.41	8.48	8.57	8.82	8.87	9.14	9.05	9.39	9.40	9.41	9.32	8.44	8.97	9.38
% CHG SAME QTR LAST YR	6.28	3.63	3.50	6.35	5.51	7.74	5.52	6.46	5.97	2.96	2.98	4.34	6.28	4.57

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 14: TENNESSEE AVERAGE HOURLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	8.00	8.13	8.19	8.11	8.12	8.22	8.18	8.29	8.37	8.47	8.60	8.08	8.16	8.43
% CHG SAME QTR LAST YR.....	2.52	2.14	2.08	1.16	1.54	1.11	-0.16	2.26	3.04	3.12	5.18	2.32	0.91	3.40
FOOD.....	8.26	8.27	8.39	8.48	8.36	8.30	8.45	8.39	8.49	8.49	8.53	8.29	8.40	8.47
% CHG SAME QTR LAST YR.....	0.85	-0.16	5.05	2.79	1.21	0.44	0.71	-1.14	1.52	2.29	0.91	2.02	1.29	0.88
TEXTILES.....	6.53	6.60	6.60	6.68	6.73	6.86	6.87	6.90	7.08	7.12	7.23	6.56	6.79	7.08
% CHG SAME QTR LAST YR.....	4.20	4.04	2.12	2.82	3.01	3.89	4.19	3.19	5.20	3.84	5.19	3.77	3.48	4.36
APPAREL.....	5.24	5.28	5.34	5.47	5.47	5.43	5.46	5.55	5.62	5.61	5.65	5.29	5.46	5.61
% CHG SAME QTR LAST YR.....	2.48	2.72	1.33	3.47	4.26	2.84	2.31	1.59	2.81	3.31	3.42	2.27	3.22	2.78
PAPER.....	10.58	10.69	10.89	10.74	10.96	10.76	10.80	11.37	11.08	10.99	11.21	10.62	10.81	11.16
% CHG SAME QTR LAST YR.....	4.58	5.28	6.42	4.24	3.59	0.65	-0.86	5.87	1.09	2.08	3.83	4.31	1.87	3.21
CHEMICALS.....	10.74	10.79	10.70	10.73	10.95	11.22	11.16	11.14	11.32	11.46	11.83	10.82	11.01	11.44
% CHG SAME QTR LAST YR.....	4.14	1.09	-1.35	-2.81	1.92	3.92	4.27	3.79	3.41	2.17	6.06	2.84	1.80	3.86
RUBBER.....	9.34	9.56	9.79	9.47	9.68	9.76	9.68	9.95	10.00	10.20	10.58	9.52	9.65	10.18
% CHG SAME QTR LAST YR.....	1.34	3.54	3.38	0.78	3.64	2.09	-1.16	5.14	3.31	4.54	9.26	2.41	1.31	5.56
LEATHER.....	5.94	5.98	5.98	6.20	6.28	6.22	5.99	6.13	6.09	6.06	6.14	5.95	6.17	6.10
% CHG SAME QTR LAST YR.....	1.31	3.52	4.79	4.79	5.78	4.07	0.11	-1.18	-2.97	-2.63	2.51	2.39	3.68	-1.11

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 15: TENNESSEE PERSON-HOURS PER WEEK
SELECTED DURABLE GOODS MANUFACTURING
(THOUSANDS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	10055	9951	10031	10088	10209	10012	10692	10523	10686	10421	10724	9967	10250	10589
% CHG SAME QTR LAST YR	-0.71	0.97	0.63	3.15	1.53	0.61	6.06	4.31	4.67	4.09	0.30	0.35	2.84	3.30
LUMBER AND WOOD	767	779	768	794	864	895	906	810	877	833	806	749	865	832
% CHG SAME QTR LAST YR	0.28	5.14	8.99	16.13	12.64	14.98	18.02	2.03	1.44	-6.96	-11.00	3.70	15.42	-3.86
FURNITURE AND FIXTURES	957	960	967	980	989	964	1041	983	1017	1029	1156	960	994	1046
% CHG SAME QTR LAST YR	-0.17	4.09	-3.26	2.53	3.31	0.49	7.67	0.32	2.82	6.71	10.96	0.56	3.51	5.28
STONE,CLAY AND GLASS	704	707	679	697	700	687	713	647	694	667	710	685	699	680
% CHG SAME QTR LAST YR	6.82	3.96	0.31	7.49	-0.66	-2.82	4.95	-7.18	-0.77	-2.97	-0.32	4.05	2.10	-2.80
PRIMARY METALS	660	702	703	696	678	658	671	669	656	661	685	695	676	668
% CHG SAME QTR LAST YR	-4.18	0.26	-2.13	-2.29	2.66	-6.37	-4.52	-3.94	-3.21	0.54	2.04	-0.42	-2.71	-1.18
FABRICATED METALS	1616	1617	1648	1652	1676	1560	1762	1736	1767	1775	1758	1624	1663	1759
% CHG SAME QTR LAST YR	-3.34	-1.67	-0.72	2.34	3.71	-3.56	6.91	5.11	5.40	13.82	-0.23	-1.34	2.37	5.81
MACHINERY	3167	2965	3042	3051	3040	2992	3188	3259	3273	3117	3193	3065	3068	3211
% CHG SAME QTR LAST YR	-1.71	-2.45	-1.72	-1.14	-4.01	0.91	4.82	6.82	7.67	4.20	0.15	-1.56	0.09	4.66
INSTRUMENTS	383	390	407	374	362	383	387	400	388	410	415	389	377	404
% CHG SAME QTR LAST YR	-1.37	1.22	4.77	-0.90	-5.47	-1.75	-4.78	6.86	7.19	7.11	7.30	0.95	-3.25	7.12

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 16: TENNESSEE PERSON-HOURS PER WEEK
SELECTED NONDURABLE GOODS MANUFACTURING
(THOUSANDS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	10218	10314	10401	10183	10185	10547	10807	10606	10492	10514	10566	10237	10431	10544
% CHG SAME QTR LAST YR.....	-0.83	0.49	0.06	1.68	-0.33	2.26	3.91	4.15	3.01	-0.32	-2.23	-0.03	1.89	1.09
FOOD.....	1570	1620	1583	1541	1561	1635	1590	1602	1606	1609	1650	1562	1582	1617
% CHG SAME QTR LAST YR.....	1.94	3.59	5.35	4.36	-0.56	0.98	0.45	3.95	2.87	-1.59	3.71	3.44	1.26	2.19
TEXTILES.....	940	958	1013	1011	987	1005	1041	1000	936	913	901	956	1011	937
% CHG SAME QTR LAST YR.....	0.77	3.42	6.93	10.63	4.98	4.92	2.72	-1.07	-5.24	-9.20	-13.45	3.78	5.72	-7.29
APPAREL.....	2418	2360	2441	2371	2438	2443	2652	2516	2497	2418	2454	2392	2476	2471
% CHG SAME QTR LAST YR.....	-1.73	-2.63	-2.49	0.92	0.85	3.55	8.66	6.14	2.40	-1.04	-7.49	-1.78	3.53	-0.20
PAPER.....	816	837	802	782	833	881	887	857	877	919	911	807	846	891
% CHG SAME QTR LAST YR.....	3.09	7.94	0.74	0.94	2.08	5.22	10.57	9.54	5.33	4.36	2.71	3.97	4.73	5.36
CHEMICALS.....	1546	1566	1557	1551	1545	1587	1570	1611	1590	1636	1619	1550	1563	1614
% CHG SAME QTR LAST YR.....	-7.78	-4.49	-1.80	1.22	-0.10	1.35	0.85	3.88	2.93	3.04	3.08	-5.83	0.83	3.23
RUBBER.....	1063	1047	1048	1015	1021	1043	1143	1109	1102	1046	1096	1056	1055	1088
% CHG SAME QTR LAST YR.....	0.96	1.76	-3.58	-4.68	-3.91	-0.45	9.00	9.26	7.95	0.31	-4.09	-0.07	-0.04	3.12
LEATHER.....	398	403	386	352	383	397	385	365	377	386	396	395	380	381
% CHG SAME QTR LAST YR.....	-14.04	-10.63	-9.15	-10.09	-3.71	-1.52	-0.27	3.44	-1.58	-2.77	2.89	-11.41	-3.89	0.41

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 17: TENNESSEE PERSON-HOURS PER WEEK
SELECTED DURABLE GOODS MANUFACTURING
SEASONALLY ADJUSTED
(THOUSANDS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	9948	10064	9956	10195	10114	10138	10553	10613	10605	10561	10582	9968	10250	10590
% CHG PREV QTR SAAR	1.68	4.74	-4.21	9.97	-3.15	0.96	17.39	2.32	-0.31	-1.67	0.82	0.34	2.82	3.32
% CHG SAME QTR LAST YR	-0.59	1.24	0.52	2.92	1.67	0.74	5.99	4.10	4.86	4.17	0.28	0.34	2.82	3.32
LUMBER AND WOOD	742	757	771	841	835	873	910	856	848	813	809	749	865	832
% CHG PREV QTR SAAR	8.39	8.35	8.14	41.57	-2.89	19.09	18.00	-21.40	-3.63	-15.75	-1.88	3.67	15.45	-3.82
% CHG SAME QTR LAST YR	0.25	5.46	8.95	15.79	12.66	15.35	17.89	1.77	1.57	-6.85	-11.05	3.67	15.45	-3.82
FURNITURE AND FIXTURES	955	982	932	996	989	988	1000	999	1019	1054	1108	960	993	1045
% CHG PREV QTR SAAR	-7.16	11.84	-18.80	30.57	-2.85	-0.24	4.61	-0.06	8.23	14.24	22.16	0.58	3.45	5.23
% CHG SAME QTR LAST YR	0.04	4.59	-3.74	2.43	3.60	0.68	7.27	0.33	3.08	6.63	10.85	0.58	3.45	5.23
STONE,CLAY AND GLASS	693	698	667	730	689	681	697	676	685	662	694	685	700	679
% CHG PREV QTR SAAR	6.87	2.81	-16.66	44.22	-20.70	-4.70	9.94	-11.49	5.09	-12.45	20.40	4.05	2.18	-2.87
% CHG SAME QTR LAST YR	7.12	4.55	-0.14	7.20	-0.51	-2.38	4.63	-7.40	-0.64	-2.73	-0.49	4.05	2.18	-2.87
PRIMARY METALS	664	713	695	688	685	667	663	660	664	670	676	694	676	668
% CHG PREV QTR SAAR	-21.09	32.66	-9.57	-4.18	-1.81	-9.86	-2.73	-1.34	2.41	3.52	3.60	-0.42	-2.70	-1.17
% CHG SAME QTR LAST YR	-3.61	0.22	-2.43	-2.41	3.07	-6.42	-4.70	-4.00	-2.98	0.43	2.03	-0.42	-2.70	-1.17
FABRICATED METALS	1612	1628	1626	1663	1674	1572	1744	1740	1767	1789	1742	1625	1663	1760
% CHG PREV QTR SAAR	-5.48	4.10	-0.52	9.44	2.63	-22.34	51.59	-0.80	6.32	5.05	-10.06	-1.35	2.33	5.80
% CHG SAME QTR LAST YR	-3.27	-1.40	-0.44	1.74	3.85	-3.49	7.23	4.63	5.56	13.84	-0.09	-1.35	2.33	5.80
MACHINERY	3107	3040	3029	3040	2987	3073	3171	3243	3220	3204	3175	3065	3068	3211
% CHG PREV QTR SAAR	3.32	-8.32	-1.44	1.38	-6.80	12.03	13.47	9.40	-2.85	-1.98	-3.61	-1.57	0.10	4.66
% CHG SAME QTR LAST YR	-1.66	-2.12	-1.83	-1.37	-3.88	1.06	4.69	6.70	7.81	4.27	0.11	-1.57	0.10	4.66
INSTRUMENTS	389	387	401	377	369	379	381	402	397	406	409	389	377	403
% CHG PREV QTR SAAR	8.70	-2.09	15.86	-22.21	-8.06	11.96	2.19	23.19	-5.02	9.75	2.84	0.95	-3.25	7.12
% CHG SAME QTR LAST YR	-0.94	0.96	4.69	-1.03	-5.09	-1.86	-4.89	6.69	7.56	7.03	7.20	0.95	-3.25	7.12

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 18: TENNESSEE PERSON-HOURS PER WEEK
SELECTED NONDURABLE GOODS MANUFACTURING
SEASONALLY ADJUSTED
(THOUSANDS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS	10232	10244	10274	10348	10219	10488	10668	10755	10545	10457	10430	10237	10431	10546
% CHG PREV QTR SAAR	1.39	0.46	1.17	2.92	-4.91	10.99	7.03	3.30	-7.60	-3.29	-1.03	-0.03	1.89	1.11
% CHG SAME QTR LAST YR	-0.71	0.71	-0.09	1.48	-0.13	2.39	3.84	3.93	3.19	-0.30	-2.24	-0.03	1.89	1.11
FOOD	1570	1577	1582	1582	1562	1596	1589	1640	1610	1572	1647	1562	1582	1617
% CHG PREV QTR SAAR	13.40	1.88	1.20	0.09	-4.89	8.85	-1.79	13.47	-7.07	-9.10	20.66	3.43	1.27	2.21
% CHG SAME QTR LAST YR	1.99	3.86	5.37	4.01	-0.46	1.19	0.44	3.64	3.04	-1.50	3.70	3.43	1.27	2.21
TEXTILES	947	960	996	1016	996	1009	1024	1001	946	918	887	956	1011	938
% CHG PREV QTR SAAR	11.21	5.65	15.76	8.33	-7.58	5.26	5.98	-8.54	-20.46	-11.40	-12.79	3.78	5.75	-7.28
% CHG SAME QTR LAST YR	1.08	3.59	6.92	10.17	5.19	5.10	2.80	-1.46	-5.09	-9.09	-13.41	3.78	5.75	-7.28
APPAREL	2394	2365	2388	2433	2421	2458	2591	2572	2486	2436	2394	2393	2476	2472
% CHG PREV QTR SAAR	-4.69	-4.84	4.04	7.74	-1.95	6.16	23.49	-2.83	-12.72	-7.88	-6.63	-1.77	3.48	-0.14
% CHG SAME QTR LAST YR	-1.57	-2.04	-2.76	0.41	1.13	3.93	8.48	5.72	2.69	-0.89	-7.58	-1.77	3.48	-0.14
PAPER	819	811	796	811	836	854	879	888	880	891	903	807	845	891
% CHG PREV QTR SAAR	8.53	-3.96	-7.31	7.81	12.89	8.95	12.50	4.10	-3.60	5.12	5.59	3.95	4.69	5.42
% CHG SAME QTR LAST YR	2.96	8.04	0.63	1.02	2.02	5.29	10.51	9.55	5.31	4.37	2.73	3.95	4.69	5.42
CHEMICALS	1549	1552	1558	1561	1549	1573	1571	1620	1596	1620	1620	1550	1563	1614
% CHG PREV QTR SAAR	1.42	0.95	1.50	0.68	-3.01	6.37	-0.47	13.12	-5.96	6.35	-0.17	-5.84	0.83	3.23
% CHG SAME QTR LAST YR	-7.64	-4.56	-1.80	1.14	0.01	1.33	0.84	3.81	3.02	3.01	3.09	-5.84	0.83	3.23
RUBBER	1065	1065	1027	1016	1026	1060	1118	1109	1111	1063	1071	1056	1055	1088
% CHG PREV QTR SAAR	-0.26	-0.14	-13.33	-4.43	4.18	13.89	23.55	-3.07	0.59	-16.13	3.03	-0.08	-0.07	3.16
% CHG SAME QTR LAST YR	1.30	1.90	-3.92	-4.69	-3.65	-0.43	8.80	9.18	8.23	0.26	-4.19	-0.08	-0.07	3.16
LEATHER	394	390	386	369	381	383	384	382	376	371	394	395	379	381
% CHG PREV QTR SAAR	-13.36	-4.41	-4.28	-16.58	14.18	1.85	0.82	-1.29	-6.52	-4.79	26.90	-11.40	-3.98	0.51
% CHG SAME QTR LAST YR	-13.97	-10.80	-9.44	-9.82	-3.38	-1.84	-0.55	3.72	-1.34	-2.99	2.75	-11.40	-3.98	0.51

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 19: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	41.8	41.6	41.9	41.8	41.8	41.2	42.9	42.3	42.4	41.5	42.5	41.7	41.9	42.2
% CHG SAME QTR LAST YR	0.24	0.65	-0.55	1.21	-0.08	-0.88	2.47	1.12	1.44	0.73	-1.09	0.48	0.68	0.54
LUMBER AND WOOD	40.7	40.8	40.8	40.3	40.8	40.6	41.0	40.0	42.8	42.0	40.9	40.3	40.7	41.4
% CHG SAME QTR LAST YR	1.16	3.12	3.21	3.16	0.25	-0.33	0.57	-0.66	5.07	3.36	-0.16	2.24	0.89	1.91
FURNITURE AND FIXTURES	39.1	39.3	39.5	40.4	40.1	39.1	41.0	38.1	39.1	39.2	41.6	39.2	40.2	39.5
% CHG SAME QTR LAST YR	-0.17	1.81	-3.66	3.94	2.47	-0.59	3.71	-5.77	-2.58	0.34	1.38	-0.08	2.38	-1.66
STONE,CLAY AND GLASS	46.6	45.9	44.6	46.0	46.5	44.7	46.2	43.3	45.7	44.5	47.0	45.5	45.8	45.1
% CHG SAME QTR LAST YR	0.21	-2.34	-4.29	2.53	-0.21	-2.61	3.59	-5.73	-1.86	-0.60	1.88	-1.18	0.79	-1.58
PRIMARY METALS	42.2	43.0	43.5	43.2	42.9	42.3	43.6	43.7	43.1	43.4	43.7	42.9	43.0	43.5
% CHG SAME QTR LAST YR	3.18	3.53	2.51	0.54	1.58	-1.55	0.23	1.08	0.39	2.52	0.31	3.58	0.19	1.07
FABRICATED METALS	41.3	41.4	41.7	41.5	41.8	40.9	42.4	41.7	42.2	41.9	41.7	41.5	41.6	41.9
% CHG SAME QTR LAST YR	-2.52	-0.24	-1.73	-0.32	1.21	-1.29	1.52	0.40	0.96	2.53	-1.65	-0.88	0.28	0.54
MACHINERY	43.0	41.7	42.3	42.2	42.4	42.1	43.4	43.6	42.8	40.7	41.6	42.3	42.5	42.2
% CHG SAME QTR LAST YR	3.45	1.30	-0.63	0.00	-1.24	0.96	2.68	3.16	0.86	-3.25	-4.07	2.36	0.59	-0.84
INSTRUMENTS	40.2	40.8	41.6	40.7	39.7	40.3	40.9	42.5	41.2	42.2	42.0	40.5	40.4	42.0
% CHG SAME QTR LAST YR	-4.81	-3.01	-0.95	2.69	-1.33	-1.06	-1.76	4.59	3.78	4.55	2.61	-3.80	-0.39	3.88

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 20: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS	40.7	41.0	41.4	41.2	40.6	41.2	41.9	41.3	40.9	40.9	41.0	40.8	41.2	41.0
% CHG SAME QTR LAST YR	0.25	0.82	0.49	2.92	-0.25	0.65	1.29	0.40	0.74	-0.89	-2.07	0.60	1.15	-0.47
FOOD	41.2	40.9	40.7	40.3	40.9	41.3	41.1	41.6	40.9	40.2	41.0	40.7	40.9	40.9
% CHG SAME QTR LAST YR	1.23	1.40	0.66	1.09	-0.73	0.98	1.15	3.23	0.16	-2.74	-0.24	1.31	0.61	0.08
TEXTILES	41.1	41.5	42.6	42.7	41.4	41.7	42.8	41.6	39.7	40.8	40.7	41.4	42.1	40.7
% CHG SAME QTR LAST YR	4.58	1.63	2.73	5.96	0.73	0.56	0.47	-2.58	-4.03	-2.16	-4.98	3.74	1.89	-3.44
APPAREL	37.7	37.6	38.3	38.1	38.1	37.5	39.3	37.8	38.4	37.8	38.3	37.5	38.3	38.1
% CHG SAME QTR LAST YR	0.27	0.27	0.88	4.76	1.06	-0.27	2.70	-0.87	0.87	0.71	-2.63	0.69	2.04	-0.50
PAPER	43.9	44.1	44.1	43.8	44.1	45.4	45.9	45.4	44.8	46.0	46.3	44.0	44.8	45.6
% CHG SAME QTR LAST YR	-0.98	4.33	0.00	-0.38	0.46	2.87	4.08	3.73	1.74	1.39	0.80	1.17	1.76	1.90
CHEMICALS	40.8	41.4	41.6	41.5	41.3	42.3	42.1	42.7	42.1	42.3	42.3	40.9	41.8	42.3
% CHG SAME QTR LAST YR	-1.53	0.81	1.88	3.93	1.14	2.25	1.12	3.05	2.02	-0.16	0.48	-0.53	2.10	1.34
RUBBER	43.4	43.3	44.3	43.8	43.3	43.2	46.3	45.5	44.0	41.1	43.3	43.7	44.1	43.5
% CHG SAME QTR LAST YR	-1.51	0.78	0.23	0.54	-0.38	-0.31	4.44	3.88	1.77	-4.94	-6.48	-0.89	1.09	-1.51
LEATHER	39.3	39.3	40.2	39.6	41.8	41.5	40.8	39.2	39.9	41.1	39.9	39.0	40.9	40.0
% CHG SAME QTR LAST YR	-7.82	-6.28	0.00	6.07	6.45	5.68	1.49	-1.01	-4.70	-1.04	-2.29	-5.35	4.89	-2.28

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 21: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	41.7	42.0	41.4	42.0	41.7	41.7	42.3	42.5	42.3	42.0	41.9	41.7	41.9	42.2
% CHG PREV QTR SAAR	0.69	3.56	-6.19	6.88	-3.66	0.30	6.43	1.23	-1.64	-2.82	-1.10	0.48	0.68	0.54
% CHG SAME QTR LAST YR	0.32	0.81	-0.69	1.12	0.01	-0.79	2.39	1.01	1.54	0.74	-1.09	0.48	0.68	0.54
LUMBER AND WOOD	40.2	40.5	40.8	41.0	40.2	40.4	41.0	40.7	42.3	41.8	40.9	40.3	40.7	41.4
% CHG PREV QTR SAAR	4.15	3.38	2.21	2.77	-7.53	2.03	5.69	-2.54	15.76	-4.10	-8.11	2.23	0.90	1.88
% CHG SAME QTR LAST YR	1.00	3.21	3.31	3.13	0.10	-0.22	0.62	-0.71	5.03	3.41	-0.14	2.23	0.90	1.88
FURNITURE AND FIXTURES	39.1	39.9	38.3	41.1	40.2	39.7	39.6	38.8	39.3	39.8	40.1	39.2	40.2	39.5
% CHG PREV QTR SAAR	-4.10	7.57	-14.65	32.93	-8.83	-5.15	-0.67	-8.14	5.03	5.55	3.25	-0.06	2.39	-1.68
% CHG SAME QTR LAST YR	0.03	2.16	-4.17	4.01	2.71	-0.48	3.37	-5.75	-2.36	0.29	1.26	-0.06	2.39	-1.68
STONE,CLAY AND GLASS	45.9	45.7	44.0	47.4	45.8	44.7	45.4	44.7	45.0	44.6	46.2	45.5	45.9	45.1
% CHG PREV QTR SAAR	-3.53	-1.54	-14.09	34.97	-12.97	-9.29	6.47	-6.39	2.90	-3.92	15.52	-1.16	0.81	-1.62
% CHG SAME QTR LAST YR	0.25	-1.81	-4.75	2.44	-0.16	-2.18	3.21	-5.81	-1.79	-0.37	1.69	-1.16	0.81	-1.62
PRIMARY METALS	42.5	43.3	43.2	43.0	43.2	42.6	43.3	43.4	43.4	43.7	43.4	42.9	43.0	43.5
% CHG PREV QTR SAAR	-2.72	8.02	-0.51	-2.51	2.34	-5.26	6.28	1.13	0.30	2.25	-2.40	3.59	0.20	1.08
% CHG SAME QTR LAST YR	3.44	3.53	2.35	0.48	1.76	-1.53	0.11	1.03	0.53	2.46	0.30	3.59	0.20	1.08
FABRICATED METALS	41.1	41.8	41.3	41.7	41.6	41.2	42.0	41.8	42.1	42.2	41.4	41.5	41.6	41.9
% CHG PREV QTR SAAR	-7.32	7.16	-4.28	3.23	-0.35	-4.01	8.17	-2.38	2.99	1.22	-7.78	-0.88	0.28	0.53
% CHG SAME QTR LAST YR	-2.42	-0.22	-1.68	-0.47	1.35	-1.40	1.66	0.25	1.08	2.43	-1.58	-0.88	0.28	0.53
MACHINERY	42.6	42.4	42.0	42.2	42.1	42.8	43.1	43.5	42.4	41.5	41.3	42.3	42.5	42.2
% CHG PREV QTR SAAR	3.71	-2.56	-3.68	2.45	-1.25	7.20	2.42	4.21	-9.62	-8.93	-1.20	2.35	0.59	-0.85
% CHG SAME QTR LAST YR	3.40	1.47	-0.67	-0.07	-1.29	1.10	2.66	3.10	0.84	-3.19	-4.05	2.35	0.59	-0.85
INSTRUMENTS	40.6	40.6	41.2	40.7	40.1	40.2	40.5	42.5	41.7	42.0	41.6	40.6	40.4	42.0
% CHG PREV QTR SAAR	9.71	-0.13	6.28	-5.12	-5.42	0.61	3.16	21.32	-7.59	3.45	-4.42	-3.80	-0.39	3.88
% CHG SAME QTR LAST YR	-4.64	-3.03	-0.93	2.53	-1.21	-1.03	-1.76	4.46	3.86	4.59	2.61	-3.80	-0.39	3.88

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 22: TENNESSEE AVERAGE WEEKLY HOURS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	40.7	40.9	41.0	41.5	40.7	41.2	41.5	41.6	41.0	40.8	40.7	40.8	41.2	41.0
% CHG PREV QTR SAAR.....	3.15	1.95	0.98	5.01	-7.83	5.24	3.20	0.92	-5.56	-1.79	-1.78	0.60	1.15	-0.46
% CHG SAME QTR LAST YR.....	0.36	0.94	0.39	2.76	-0.09	0.70	1.25	0.25	0.87	-0.86	-2.08	0.60	1.15	-0.46
FOOD.....	40.9	40.8	40.6	40.7	40.7	41.3	41.1	41.9	40.8	40.1	41.0	40.7	40.9	40.9
% CHG PREV QTR SAAR.....	5.98	-1.11	-1.75	0.34	0.11	5.93	-1.69	7.89	-9.88	-6.19	8.57	1.30	0.61	0.08
% CHG SAME QTR LAST YR.....	1.32	1.58	0.65	0.82	-0.61	1.12	1.13	2.98	0.31	-2.69	-0.24	1.30	0.61	0.08
TEXTILES.....	41.4	41.5	42.0	42.8	41.8	41.7	42.3	41.6	40.2	40.8	40.2	41.4	42.2	40.7
% CHG PREV QTR SAAR.....	9.15	0.65	5.38	7.63	-8.95	-1.08	5.54	-6.29	-12.73	6.22	-5.94	3.75	1.91	-3.45
% CHG SAME QTR LAST YR.....	4.91	1.57	2.80	5.65	0.97	0.54	0.57	-2.85	-3.87	-2.14	-4.92	3.75	1.91	-3.45
APPAREL.....	37.4	37.6	37.9	38.9	37.8	37.6	38.9	38.5	38.2	37.9	37.8	37.5	38.3	38.1
% CHG PREV QTR SAAR.....	1.74	2.01	3.33	11.18	-10.67	-2.73	14.89	-4.25	-2.72	-3.47	-0.13	0.70	2.06	-0.51
% CHG SAME QTR LAST YR.....	0.30	0.62	0.74	4.50	1.15	-0.04	2.64	-1.12	1.01	0.81	-2.66	0.70	2.06	-0.51
PAPER.....	44.3	43.8	43.8	44.0	44.5	45.1	45.5	45.7	45.3	45.8	45.8	44.0	44.8	45.6
% CHG PREV QTR SAAR.....	1.62	-4.10	-0.85	2.15	5.00	5.40	3.29	1.66	-3.23	4.10	0.59	1.16	1.74	1.92
% CHG SAME QTR LAST YR.....	-0.93	4.32	-0.09	-0.33	0.49	2.89	3.95	3.83	1.73	1.42	0.75	1.16	1.74	1.92
CHEMICALS.....	40.9	41.3	41.5	41.6	41.4	42.2	41.9	42.9	42.3	42.1	42.1	40.9	41.8	42.4
% CHG PREV QTR SAAR.....	8.67	3.42	1.90	1.73	-1.97	7.41	-2.43	9.52	-5.22	-2.09	0.36	-0.53	2.10	1.35
% CHG SAME QTR LAST YR.....	-1.41	0.76	1.84	3.89	1.25	2.21	1.11	2.99	2.13	-0.21	0.50	-0.53	2.10	1.35
RUBBER AND PLASTICS.....	43.6	44.2	43.6	43.4	43.6	44.1	45.4	45.0	44.4	42.0	42.5	43.7	44.1	43.5
% CHG PREV QTR SAAR.....	3.70	5.37	-5.64	-1.68	1.74	5.11	12.47	-3.72	-5.04	-20.50	4.90	-0.91	1.07	-1.51
% CHG SAME QTR LAST YR.....	-1.23	0.99	0.00	0.34	-0.14	-0.20	4.28	3.74	1.96	-4.91	-6.56	-0.91	1.07	-1.51
LEATHER.....	38.8	38.9	40.2	40.6	41.4	41.0	40.8	40.3	39.4	40.5	39.8	39.0	40.9	40.0
% CHG PREV QTR SAAR.....	6.56	0.40	14.47	4.46	7.31	-3.68	-1.93	-4.78	-8.07	11.46	-6.85	-5.36	4.91	-2.25
% CHG SAME QTR LAST YR.....	-7.83	-6.52	-0.07	6.35	6.54	5.44	1.44	-0.88	-4.64	-1.10	-2.36	-5.36	4.91	-2.25

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 23: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	328.5	330.7	335.9	331.3	326.7	320.4	335.7	325.6	321.3	312.6	321.2	329.6	328.5	320.2
% CHG SAME QTR LAST YR	2.70	3.37	2.11	2.43	-0.55	-3.14	-0.06	-1.71	-1.64	-2.42	-4.33	2.45	-0.34	-2.54
LUMBER AND WOOD	209.6	208.2	206.5	205.8	208.7	208.1	209.6	202.2	218.5	214.4	206.7	205.3	208.1	210.4
% CHG SAME QTR LAST YR	3.11	3.76	3.32	4.46	-0.41	-0.05	1.49	-1.78	4.67	3.06	-1.40	3.03	1.32	1.14
FURNITURE AND FIXTURES	251.6	251.0	254.9	262.6	257.0	235.9	238.4	223.8	235.7	234.6	255.4	251.6	248.5	237.4
% CHG SAME QTR LAST YR	1.90	2.69	-3.84	5.57	2.16	-6.02	-6.46	-14.75	-8.28	-0.56	7.12	0.89	-1.22	-4.46
STONE,CLAY AND GLASS	452.1	454.1	431.2	452.6	443.5	422.6	450.8	431.7	448.4	421.6	461.8	444.3	442.4	440.9
% CHG SAME QTR LAST YR	3.48	0.10	-5.71	2.96	-1.91	-6.95	4.55	-4.63	1.12	-0.24	2.44	0.03	-0.42	-0.34
PRIMARY METALS	393.3	400.9	414.6	411.5	411.2	427.3	427.1	407.5	400.0	400.7	398.4	406.6	419.3	401.6
% CHG SAME QTR LAST YR	-1.07	0.91	1.26	-1.49	4.56	6.59	3.01	-0.97	-2.74	-6.23	-6.71	2.00	3.11	-4.21
FABRICATED METALS	334.1	339.1	341.4	336.9	334.0	307.7	338.6	334.7	336.0	335.9	327.6	339.7	329.3	333.6
% CHG SAME QTR LAST YR	-0.49	-0.07	-2.26	-2.07	-0.03	-9.24	-0.83	-0.65	0.59	8.14	-3.23	-0.44	-3.05	1.29
MACHINERY	325.3	314.6	323.0	320.3	321.7	318.4	328.2	328.4	317.9	299.2	307.9	319.3	322.2	313.4
% CHG SAME QTR LAST YR	6.30	3.45	2.99	1.87	-1.11	1.21	1.59	2.51	-1.17	-6.02	-6.16	4.93	0.88	-2.73
INSTRUMENTS	297.9	301.4	308.2	304.9	295.3	305.8	303.8	325.9	312.4	317.1	309.1	299.2	302.4	316.1
% CHG SAME QTR LAST YR	-0.89	-1.86	0.13	5.32	-0.87	1.47	-1.44	6.90	5.81	3.68	1.74	-2.00	1.07	4.52

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 24: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS	286.6	290.3	292.6	283.8	276.5	281.2	281.3	279.7	276.1	276.8	279.0	288.0	280.7	277.9
% CHG SAME QTR LAST YR	0.69	0.55	0.18	0.40	-3.55	-3.13	-3.86	-1.43	-0.14	-1.55	-0.83	0.48	-2.55	-0.99
FOOD	299.6	295.0	294.8	290.7	286.6	284.8	285.5	284.8	280.4	272.9	276.7	294.9	286.9	278.7
% CHG SAME QTR LAST YR	0.03	-1.14	3.28	0.19	-4.33	-3.46	-3.15	-2.03	-2.18	-4.17	-3.08	0.88	-2.70	-2.86
TEXTILES	236.3	238.7	242.9	242.5	233.4	237.4	241.7	234.0	226.8	232.3	232.6	237.2	238.8	231.4
% CHG SAME QTR LAST YR	6.77	3.26	2.46	5.06	-1.20	-0.56	-0.47	-3.49	-2.87	-2.14	-3.76	5.07	0.67	-3.07
APPAREL	174.2	173.2	176.5	177.3	174.7	169.1	176.3	171.4	174.3	169.5	171.0	173.4	174.4	171.5
% CHG SAME QTR LAST YR	0.67	0.57	-0.16	4.53	0.33	-2.37	-0.10	-3.33	-0.23	0.22	-3.04	0.53	0.57	-1.62
PAPER	408.9	411.4	415.0	399.7	405.2	405.5	407.2	421.4	400.9	404.3	410.3	408.6	404.4	409.2
% CHG SAME QTR LAST YR	1.46	7.26	3.94	0.13	-0.91	-1.44	-1.90	5.42	-1.05	-0.31	0.77	3.00	-1.04	1.19
CHEMICALS	386.4	389.6	384.4	378.3	379.3	394.1	385.3	388.5	384.9	387.2	395.4	387.2	384.3	389.0
% CHG SAME QTR LAST YR	0.47	-0.49	-1.84	-2.60	-1.84	1.15	0.24	2.68	1.49	-1.74	2.61	-0.14	-0.76	1.24
RUBBER	357.4	361.0	374.6	352.9	351.4	349.8	367.7	370.0	355.4	334.8	361.8	363.6	355.4	355.5
% CHG SAME QTR LAST YR	-2.22	1.89	1.20	-2.30	-1.69	-3.12	-1.85	4.85	1.15	-4.27	-1.62	-0.93	-2.24	0.02
LEATHER	205.6	204.8	207.8	208.9	220.4	214.4	200.7	196.2	196.1	199.0	193.6	203.3	211.1	196.2
% CHG SAME QTR LAST YR	-8.50	-5.26	2.35	7.18	7.22	4.69	-3.40	-6.09	-11.04	-7.18	-3.56	-5.43	3.86	-7.06

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 25: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS	328.6	335.4	329.7	332.5	327.3	325.1	329.0	326.6	322.3	317.1	314.7	329.6	328.5	320.2
% CHG PREV QTR SAAR	4.99	8.43	-6.60	3.44	-6.08	-2.72	4.95	-2.88	-5.13	-6.31	-3.06	2.46	-0.34	-2.52
% CHG SAME QTR LAST YR	2.87	3.52	1.85	2.41	-0.41	-3.07	-0.20	-1.77	-1.52	-2.44	-4.36	2.46	-0.34	-2.52
LUMBER AND WOOD	206.6	206.9	206.3	210.5	205.5	206.8	209.4	206.7	215.2	213.1	206.6	205.3	208.1	210.4
% CHG PREV QTR SAAR	10.70	0.70	-1.29	8.53	-9.16	2.47	5.20	-5.09	17.46	-3.86	-11.72	3.01	1.35	1.11
% CHG SAME QTR LAST YR	2.99	3.63	3.45	4.54	-0.50	-0.07	1.54	-1.81	4.70	3.05	-1.37	3.01	1.35	1.11
FURNITURE AND FIXTURES	250.2	256.9	246.8	266.7	255.5	241.8	230.4	227.5	234.5	240.4	246.8	251.5	248.6	237.3
% CHG PREV QTR SAAR	-3.24	11.27	-14.90	36.47	-15.79	-19.76	-17.56	-5.00	12.85	10.44	11.19	0.92	-1.15	-4.56
% CHG SAME QTR LAST YR	1.86	3.10	-4.25	5.75	2.14	-5.88	-6.62	-14.71	-8.23	-0.60	7.12	0.92	-1.15	-4.56
STONE,CLAY AND GLASS	446.3	457.5	425.2	460.3	438.8	427.9	443.1	437.5	444.6	428.1	453.3	444.4	442.5	440.9
% CHG PREV QTR SAAR	-1.94	10.40	-25.37	37.34	-17.39	-9.57	14.95	-4.97	6.64	-14.03	25.69	0.04	-0.41	-0.38
% CHG SAME QTR LAST YR	3.90	0.67	-6.24	2.63	-1.67	-6.46	4.21	-4.96	1.31	0.03	2.29	0.04	-0.41	-0.38
PRIMARY METALS	397.3	402.3	408.3	411.5	417.1	427.8	420.3	407.2	407.1	400.1	392.2	406.5	419.2	401.6
% CHG PREV QTR SAAR	-18.52	5.10	6.12	3.21	5.53	10.69	-6.84	-11.90	-0.08	-6.77	-7.65	2.01	3.12	-4.19
% CHG SAME QTR LAST YR	-0.57	0.72	1.11	-1.59	4.99	6.35	2.95	-1.05	-2.39	-6.49	-6.70	2.01	3.12	-4.19
FABRICATED METALS	335.9	343.2	336.9	335.3	336.5	310.8	334.8	332.8	338.6	338.7	324.3	339.7	329.3	333.6
% CHG PREV QTR SAAR	-7.80	8.88	-7.06	-1.99	1.44	-27.21	34.67	-2.36	7.17	0.17	-15.99	-0.45	-3.06	1.31
% CHG SAME QTR LAST YR	-0.21	-0.17	-2.18	-2.21	0.15	-9.44	-0.64	-0.73	0.64	9.00	-3.13	-0.45	-3.06	1.31
MACHINERY	322.3	320.5	320.3	320.0	318.6	324.9	325.0	328.0	314.8	305.6	304.9	319.3	322.2	313.3
% CHG PREV QTR SAAR	10.54	-2.13	-0.30	-0.29	-1.78	8.17	0.11	3.76	-15.14	-11.23	-0.90	4.91	0.88	-2.73
% CHG SAME QTR LAST YR	6.29	3.66	2.86	1.83	-1.13	1.38	1.48	2.50	-1.18	-5.95	-6.19	4.91	0.88	-2.73
INSTRUMENTS	301.5	300.8	308.0	302.2	299.0	304.9	303.7	323.2	316.2	316.0	309.1	299.3	302.4	316.1
% CHG PREV QTR SAAR	22.16	-0.92	9.83	-7.27	-4.23	8.21	-1.61	28.28	-8.36	-0.25	-8.43	-1.98	1.06	4.53
% CHG SAME QTR LAST YR	-0.76	-2.07	0.19	5.37	-0.85	1.36	-1.39	6.94	5.77	3.64	1.79	-1.98	1.06	4.53

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 26: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
SEASONALLY ADJUSTED
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS	288.3	289.3	289.0	286.3	278.4	280.3	277.8	282.1	278.2	275.9	275.5	288.0	280.7	277.9
% CHG PREV QTR SAAR	4.11	1.34	-0.29	-3.69	-10.67	2.72	-3.48	6.33	-5.45	-3.17	-0.61	0.49	-2.54	-0.99
% CHG SAME QTR LAST YR	0.84	0.58	0.09	0.33	-3.44	-3.11	-3.90	-1.49	-0.08	-1.54	-0.82	0.49	-2.54	-0.99
FOOD	297.1	295.0	294.5	292.7	284.7	285.5	284.9	286.0	279.0	273.9	276.1	294.9	287.0	278.8
% CHG PREV QTR SAAR	5.64	-2.76	-0.72	-2.39	-10.56	1.21	-0.84	1.51	-9.42	-7.20	3.34	0.89	-2.70	-2.87
% CHG SAME QTR LAST YR	0.18	-0.88	3.15	-0.11	-4.18	-3.22	-3.25	-2.30	-1.99	-4.09	-3.10	0.89	-2.70	-2.87
TEXTILES	238.8	238.4	239.4	243.5	236.3	236.9	238.7	234.4	229.9	231.7	229.9	237.2	238.8	231.5
% CHG PREV QTR SAAR	11.52	-0.62	1.72	6.95	-11.18	0.92	3.02	-7.01	-7.39	3.24	-3.07	5.09	0.68	-3.08
% CHG SAME QTR LAST YR	7.08	3.14	2.59	4.79	-1.01	-0.63	-0.31	-3.74	-2.73	-2.17	-3.65	5.09	0.68	-3.08
APPAREL	172.7	173.9	175.2	179.4	173.2	170.2	175.0	173.1	172.8	170.8	169.6	173.4	174.4	171.6
% CHG PREV QTR SAAR	1.80	3.01	2.87	9.92	-13.10	-6.75	11.76	-4.29	-0.56	-4.71	-2.59	0.53	0.58	-1.64
% CHG SAME QTR LAST YR	0.62	0.87	-0.25	4.35	0.30	-2.16	-0.11	-3.51	-0.20	0.34	-3.05	0.53	0.58	-1.64
PAPER	412.4	411.8	411.4	399.7	408.4	405.9	403.7	421.5	403.8	404.9	406.9	408.7	404.4	409.3
% CHG PREV QTR SAAR	13.60	-0.58	-0.39	-10.83	8.95	-2.39	-2.22	18.85	-15.73	1.03	1.99	2.99	-1.05	1.19
% CHG SAME QTR LAST YR	1.37	7.23	4.07	0.08	-0.96	-1.41	-1.87	5.44	-1.12	-0.26	0.79	2.99	-1.05	1.19
CHEMICALS	389.5	385.9	381.5	381.8	382.3	390.4	382.5	391.9	388.0	383.5	392.7	387.2	384.2	389.0
% CHG PREV QTR SAAR	-2.67	-3.63	-4.45	0.26	0.56	8.79	-7.88	10.25	-3.95	-4.59	9.99	-0.14	-0.78	1.25
% CHG SAME QTR LAST YR	0.56	-0.49	-1.83	-2.64	-1.84	1.18	0.26	2.67	1.50	-1.78	2.67	-0.14	-0.78	1.25
RUBBER	361.2	370.4	364.3	349.8	355.9	358.8	356.8	366.9	360.5	343.2	350.8	363.5	355.3	355.4
% CHG PREV QTR SAAR	3.51	10.58	-6.48	-15.00	7.25	3.30	-2.24	11.87	-6.85	-17.83	9.15	-0.95	-2.25	0.01
% CHG SAME QTR LAST YR	-1.94	1.93	0.99	-2.34	-1.47	-3.13	-2.05	4.92	1.28	-4.35	-1.68	-0.95	-2.25	0.01
LEATHER	201.3	203.3	211.0	211.9	216.1	212.2	203.8	199.2	192.3	196.8	196.5	203.2	211.0	196.2
% CHG PREV QTR SAAR	8.30	4.00	16.00	1.75	8.12	-6.98	-14.85	-8.73	-13.19	9.60	-0.62	-5.41	3.83	-7.01
% CHG SAME QTR LAST YR	-8.53	-5.59	2.45	7.38	7.33	4.38	-3.38	-5.97	-10.99	-7.27	-3.61	-5.41	3.83	-7.01

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 27: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED DURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL DURABLE GOODS.....	372.9	379.4	389.0	389.6	389.4	386.0	408.9	398.9	398.1	391.1	406.3	377.0	393.5	398.6
% CHG SAME QTR LAST YR.....	4.83	5.87	4.55	6.23	4.44	1.76	5.12	2.38	2.23	1.30	-0.64	4.96	4.37	1.30
LUMBER AND WOOD.....	237.9	238.8	239.2	242.1	248.8	250.7	255.3	247.7	270.7	268.2	261.4	234.8	249.2	262.0
% CHG SAME QTR LAST YR.....	5.24	6.26	5.79	8.33	4.59	5.01	6.74	2.32	8.80	6.99	2.40	5.54	6.13	5.13
FURNITURE AND FIXTURES.....	285.5	287.9	295.2	308.8	306.4	284.3	290.4	274.2	292.1	293.5	323.1	287.7	297.5	295.7
% CHG SAME QTR LAST YR.....	4.01	5.16	-1.55	9.49	7.29	-1.27	-1.61	-11.20	-4.66	3.24	11.26	3.32	3.40	-0.58
STONE,CLAY AND GLASS.....	513.1	520.9	499.3	532.3	528.6	509.2	549.1	528.8	555.6	527.4	584.2	508.0	529.8	549.0
% CHG SAME QTR LAST YR.....	5.62	2.51	-3.46	6.77	3.02	-2.24	9.97	-0.65	5.11	3.57	6.39	2.44	4.30	3.62
PRIMARY METALS.....	446.4	459.8	480.1	483.9	490.2	514.9	520.1	499.2	495.6	501.3	504.0	465.0	502.3	500.0
% CHG SAME QTR LAST YR.....	0.98	3.34	3.67	2.15	9.81	11.98	8.34	3.16	1.09	-2.65	-3.11	4.48	8.02	-0.46
FABRICATED METALS.....	379.2	388.9	395.4	396.2	398.2	370.8	412.4	410.0	416.3	420.2	414.4	388.4	394.4	415.2
% CHG SAME QTR LAST YR.....	1.57	2.34	0.07	1.56	4.99	-4.65	4.30	3.49	4.56	13.31	0.50	1.98	1.54	5.29
MACHINERY.....	369.2	360.8	374.1	376.7	383.5	383.7	399.7	402.3	393.9	374.3	389.5	365.2	385.9	390.0
% CHG SAME QTR LAST YR.....	8.50	5.95	5.45	5.65	3.85	6.33	6.86	6.78	2.72	-2.43	-2.54	7.47	5.67	1.07
INSTRUMENTS.....	338.1	345.7	356.9	358.5	352.0	368.5	370.0	399.2	387.1	396.6	391.0	342.3	362.3	393.5
% CHG SAME QTR LAST YR.....	1.16	0.50	2.52	9.22	4.11	6.60	3.66	11.35	9.98	7.64	5.67	0.40	5.85	8.62

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 28: TENNESSEE AVERAGE WEEKLY EARNINGS
SELECTED NONDURABLE GOODS MANUFACTURING PRODUCTION WORKERS
(CURRENT DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONDURABLE GOODS.....	325.3	332.9	338.8	333.7	329.5	338.8	342.6	342.7	342.1	346.3	352.9	329.4	336.2	346.0
% CHG SAME QTR LAST YR.....	2.77	2.97	2.57	4.12	1.29	1.77	1.12	2.68	3.80	2.21	3.00	2.93	2.06	2.92
FOOD.....	340.0	338.4	341.3	341.9	341.6	343.2	347.7	348.9	347.4	341.4	350.0	337.2	343.6	346.9
% CHG SAME QTR LAST YR.....	2.09	1.24	5.74	3.90	0.47	1.43	1.87	2.05	1.68	-0.52	0.66	3.35	1.90	0.97
TEXTILES.....	268.2	273.8	281.2	285.2	278.3	286.1	294.4	286.7	280.9	290.6	294.3	271.2	286.0	288.1
% CHG SAME QTR LAST YR.....	8.98	5.74	4.90	8.95	3.76	4.47	4.68	0.53	0.96	1.60	-0.05	7.61	5.43	0.75
APPAREL.....	197.7	198.7	204.4	208.5	208.3	203.8	214.8	209.9	216.0	212.1	216.3	198.3	208.8	213.6
% CHG SAME QTR LAST YR.....	2.75	3.00	2.22	8.40	5.37	2.57	5.07	0.70	3.70	4.05	0.70	2.98	5.32	2.27
PAPER.....	464.1	471.9	480.6	470.1	483.0	488.7	495.9	516.2	496.8	505.8	519.0	467.3	484.4	509.4
% CHG SAME QTR LAST YR.....	3.56	9.85	6.42	3.84	4.06	3.54	3.19	9.82	2.85	3.50	4.66	5.53	3.65	5.17
CHEMICALS.....	438.5	446.8	445.1	444.9	452.1	474.8	469.3	475.9	476.9	484.4	500.2	442.8	460.3	484.3
% CHG SAME QTR LAST YR.....	2.55	1.91	0.50	1.01	3.09	6.27	5.44	6.96	5.50	2.01	6.57	2.29	3.96	5.22
RUBBER.....	405.7	414.1	433.8	415.0	418.8	421.5	447.9	453.2	440.3	418.9	457.6	415.8	425.8	442.5
% CHG SAME QTR LAST YR.....	-0.19	4.34	3.61	1.32	3.24	1.78	3.23	9.22	5.14	-0.62	2.18	1.51	2.40	3.93
LEATHER.....	233.3	234.9	240.6	245.7	262.7	258.3	244.5	240.3	242.9	248.9	244.9	232.5	252.8	244.2
% CHG SAME QTR LAST YR.....	-6.61	-2.98	4.79	11.15	12.60	9.99	1.60	-2.16	-7.53	-3.64	0.16	-3.08	8.75	-3.38

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 29: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
(1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL NONAGRICULTURAL	16139	15725	15703	16046	15581	15574	15805	15800	15727	16000	16135	15862	15751	15916
% CHG SAME QTR LAST YR	4.36	2.10	1.83	1.04	-3.46	-0.96	0.64	-1.54	0.94	2.74	2.09	2.28	-0.70	1.04
MINING	19729	19337	18918	20281	19889	20213	19633	21366	20022	20505	19783	19508	20004	20419
% CHG SAME QTR LAST YR	-0.66	1.59	-1.73	1.16	0.81	4.53	3.78	5.35	0.67	1.45	0.76	-0.44	2.54	2.08
CONSTRUCTION	16458	16104	16904	18168	16676	15845	16562	17884	17169	17159	17563	16847	16813	17444
% CHG SAME QTR LAST YR	2.48	4.54	5.69	1.38	1.32	-1.61	-2.02	-1.57	2.96	8.30	6.04	3.59	-0.20	3.75
MANUFACTURING	19184	17575	17493	17677	17260	17155	17345	17296	17244	17660	17641	17946	17359	17460
% CHG SAME QTR LAST YR	13.73	2.85	1.87	0.82	-10.03	-2.39	-0.85	-2.15	-0.09	2.94	1.71	5.09	-3.27	0.58
DURABLE GOODS	21971	18773	18592	18650	18119	18015	18334	18276	18074	18572	18738	19491	18279	18415
% CHG SAME QTR LAST YR	24.16	4.16	1.68	0.12	-17.53	-4.04	-1.39	-2.00	-0.25	3.09	2.21	8.25	-6.22	0.74
NONDURABLE GOODS	16519	16435	16441	16727	16423	16338	16390	16346	16429	16769	16565	16473	16469	16527
% CHG SAME QTR LAST YR	2.75	1.43	1.96	1.39	-0.58	-0.59	-0.31	-2.28	0.04	2.64	1.07	1.69	-0.02	0.35
TRADE	12167	12077	11935	12426	12021	11925	11923	12253	12259	12305	12329	12134	12074	12287
% CHG SAME QTR LAST YR	1.39	1.87	1.72	0.55	-1.20	-1.26	-0.09	-1.39	1.98	3.18	3.40	1.57	-0.50	1.76
SERVICES	14484	14330	14843	15172	14537	14342	15556	14761	14670	15111	16223	14630	14902	15191
% CHG SAME QTR LAST YR	1.12	0.97	1.74	2.07	0.37	0.08	4.81	-2.71	0.91	5.36	4.28	1.05	1.86	1.94
FIN,INS,REAL EST	18844	18691	19015	18871	18353	18872	19061	17842	18290	17989	18476	18866	18789	18149
% CHG SAME QTR LAST YR	4.77	3.79	4.23	-0.22	-2.60	0.97	0.24	-5.45	-0.35	-4.68	-3.07	4.34	-0.40	-3.41
TRANS,COMM,PUB UTIL	21920	21466	21432	21789	21319	21372	21671	21561	21707	21567	21833	21698	21538	21667
% CHG SAME QTR LAST YR	1.12	-0.76	-0.28	-0.84	-2.74	-0.44	1.12	-1.05	1.82	0.91	0.75	-0.24	-0.74	0.60
GOVERNMENT	16317	17016	16282	16459	16411	17146	16389	16809	16629	17251	16278	16412	16601	16742
% CHG SAME QTR LAST YR	-1.27	2.93	1.63	2.67	0.58	0.76	0.66	2.13	1.33	0.61	-0.67	0.52	1.15	0.85
FEDERAL,CIVILIAN	23576	23808	23946	23990	23754	23985	24143	24091	24053	24224	24212	23755	23968	24145
% CHG SAME QTR LAST YR	-3.66	-0.94	-0.54	1.27	0.75	0.74	0.82	0.42	1.26	0.99	0.29	-2.60	0.90	0.74
STATE AND LOCAL	14542	15284	14457	14620	14617	15413	14513	14985	14776	15516	14519	14610	14791	14949
% CHG SAME QTR LAST YR	0.27	5.07	2.65	3.27	0.52	0.85	0.39	2.49	1.09	0.67	0.04	2.22	1.24	1.07

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 30: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
SEASONALLY ADJUSTED 1982 DOLLARS

	HISTORICAL - DATA										ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	16200	15774	15828	15811	15636	15620	15930	15574	15779	16045	16263	15861	15749	15915
% CHG PREV QTR SAAR	15.04	-10.10	1.36	-0.42	-4.35	-0.42	8.19	-8.65	5.37	6.90	5.56	2.28	-0.70	1.05
% CHG SAME QTR LAST YR	4.34	2.06	1.84	1.08	-3.48	-0.98	0.65	-1.50	0.92	2.72	2.09	2.28	-0.70	1.05
MINING	19911	19473	19396	19472	20053	20329	20119	20560	20178	20603	20269	19493	19993	20402
% CHG PREV QTR SAAR	15.86	-8.52	-1.58	1.58	12.49	5.61	-4.07	9.07	-7.22	8.68	-6.32	-0.44	2.57	2.05
% CHG SAME QTR LAST YR	-0.83	1.41	-1.73	1.46	0.71	4.40	3.73	5.59	0.62	1.35	0.75	-0.44	2.57	2.05
CONSTRUCTION	16546	16976	17221	16775	16777	16646	16863	16572	17265	17998	17878	16805	16765	17428
% CHG PREV QTR SAAR	1.67	10.79	5.91	-9.97	0.05	-3.09	5.32	-6.72	17.79	18.11	-2.64	3.67	-0.24	3.96
% CHG SAME QTR LAST YR	2.55	4.11	5.65	1.80	1.39	-1.94	-2.08	-1.21	2.91	8.13	6.02	3.67	-0.24	3.96
MANUFACTURING	19240	17618	17518	17566	17303	17188	17371	17202	17278	17689	17669	17946	17357	17459
% CHG PREV QTR SAAR	49.28	-29.70	-2.25	1.09	-5.85	-2.62	4.33	-3.85	1.77	9.87	-0.44	5.10	-3.28	0.59
% CHG SAME QTR LAST YR	13.70	2.75	1.88	0.91	-10.07	-2.44	-0.84	-2.07	-0.15	2.91	1.71	5.10	-3.28	0.59
DURABLE GOODS	22112	18765	18580	18562	18227	18001	18320	18209	18168	18545	18728	19493	18277	18413
% CHG PREV QTR SAAR	103.46	-48.14	-3.89	-0.38	-7.03	-4.87	7.28	-2.39	-0.89	8.56	3.99	8.29	-6.24	0.74
% CHG SAME QTR LAST YR	24.10	4.05	1.65	0.26	-17.57	-4.07	-1.40	-1.90	-0.32	3.03	2.23	8.29	-6.24	0.74
NONDURABLE GOODS	16512	16521	16498	16596	16410	16413	16452	16228	16409	16848	16627	16473	16468	16528
% CHG PREV QTR SAAR	3.74	0.23	-0.57	2.42	-4.42	0.07	0.95	-5.32	4.53	11.14	-5.15	1.69	-0.03	0.36
% CHG SAME QTR LAST YR	2.74	1.33	2.02	1.44	-0.62	-0.66	-0.28	-2.22	-0.01	2.65	1.06	1.69	-0.03	0.36
TRADE	12141	12167	12150	12138	11997	12006	12142	11973	12235	12383	12556	12132	12071	12287
% CHG PREV QTR SAAR	2.46	0.86	-0.58	-0.40	-4.57	0.32	4.59	-5.44	9.03	4.96	5.69	1.57	-0.50	1.79
% CHG SAME QTR LAST YR	1.37	1.78	1.78	0.58	-1.19	-1.33	-0.07	-1.36	1.98	3.14	3.41	1.57	-0.50	1.79
SERVICES	14597	14568	14798	14850	14649	14576	15512	14450	14782	15356	16177	14627	14897	15191
% CHG PREV QTR SAAR	1.41	-0.79	6.45	1.43	-5.30	-1.98	28.27	-24.70	9.52	16.47	23.15	1.06	1.84	1.98
% CHG SAME QTR LAST YR	1.09	0.96	1.76	2.09	0.36	0.05	4.83	-2.70	0.91	5.35	4.28	1.06	1.84	1.98
FIN,INS,REAL EST	18943	18840	18968	18670	18449	19019	19018	17653	18384	18126	18435	18865	18789	18150
% CHG PREV QTR SAAR	5.11	-2.15	2.75	-6.16	-4.64	12.93	-0.02	-25.76	17.62	-5.50	7.00	4.33	-0.40	-3.40
% CHG SAME QTR LAST YR	4.80	3.75	4.26	-0.21	-2.61	0.95	0.26	-5.44	-0.35	-4.69	-3.06	4.33	-0.40	-3.40
TRANS,COMM,PUB UTIL	21921	21611	21632	21453	21302	21528	21848	21253	21679	21733	21994	21691	21533	21665
% CHG PREV QTR SAAR	6.12	-5.55	0.40	-3.27	-2.78	4.31	6.09	-10.47	8.26	0.99	4.90	-0.24	-0.73	0.61
% CHG SAME QTR LAST YR	1.06	-0.73	-0.40	-0.67	-2.82	-0.38	1.00	-0.93	1.77	0.95	0.67	-0.24	-0.73	0.61
GOVERNMENT	16455	16404	16546	16640	16547	16538	16656	16989	16763	16644	16550	16406	16535	16736
% CHG PREV QTR SAAR	6.02	-1.26	3.52	2.28	-2.21	-0.21	2.87	8.24	-5.21	-2.82	-2.22	0.49	1.15	0.85
% CHG SAME QTR LAST YR	-1.29	3.01	1.64	2.60	0.55	0.82	0.66	2.10	1.30	0.64	-0.63	0.49	1.15	0.85
FEDERAL,CIVILIAN	23858	23768	23651	24081	24028	23886	23843	24238	24320	24096	23912	23742	23959	24141
% CHG PREV QTR SAAR	2.84	-1.50	-1.96	7.48	-0.88	-2.34	-0.71	6.78	1.36	-3.64	-3.01	-2.60	0.92	0.76
% CHG SAME QTR LAST YR	-3.70	-1.21	-0.61	1.64	0.71	0.49	0.81	0.65	1.22	0.88	0.29	-2.60	0.92	0.76
STATE AND LOCAL	14654	14606	14794	14807	14727	14749	14854	15162	14884	14859	14859	14604	14784	14941
% CHG PREV QTR SAAR	8.39	-1.30	5.24	0.37	-2.15	0.61	2.87	8.57	-7.15	-0.68	0.02	2.18	1.24	1.06
% CHG SAME QTR LAST YR	0.26	5.28	2.68	3.10	0.50	0.98	0.41	2.40	1.07	0.74	0.04	2.18	1.24	1.06

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 31: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
SEASONALLY ADJUSTED CURRENT DOLLARS

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	18387	18093	18329	18594	18638	18822	19403	19079	19551	20072	20573	18137	18864	19819
% CHG PREV QTR SAAR	15.45	-6.23	5.31	5.92	0.96	4.00	12.94	-6.53	10.27	11.10	10.37	4.78	4.01	5.06
% CHG SAME QTR LAST YR	6.50	4.52	4.27	4.83	1.37	4.03	5.86	2.61	4.89	6.64	6.03	4.78	4.01	5.06
MINING	22599	22335	22460	22899	23903	24496	24504	25186	25001	25774	25640	22290	23951	25400
% CHG PREV QTR SAAR	16.27	-4.59	2.25	8.04	18.74	10.30	0.14	11.60	-2.91	12.95	-2.06	1.99	7.45	6.05
% CHG SAME QTR LAST YR	1.22	3.86	0.62	5.22	5.77	9.67	9.10	9.99	4.59	5.22	4.64	1.99	7.45	6.05
CONSTRUCTION	18780	19471	19942	19727	19998	20058	20539	20301	21391	22516	22616	19220	20081	21706
% CHG PREV QTR SAAR	2.03	15.55	10.03	-4.24	5.61	1.21	9.94	-4.56	23.27	22.75	1.79	6.21	4.48	8.09
% CHG SAME QTR LAST YR	4.67	6.62	8.17	5.57	6.48	3.01	2.99	2.91	6.97	12.25	10.11	6.21	4.48	8.09
MANUFACTURING	21838	20208	20286	20657	20625	20712	21158	21072	21407	22129	22351	20518	20788	21740
% CHG PREV QTR SAAR	49.81	-26.68	1.55	7.53	-0.62	1.70	8.90	-1.62	6.50	14.18	4.09	7.64	1.32	4.58
% CHG SAME QTR LAST YR	16.06	5.22	4.31	4.65	-5.55	2.50	4.30	2.01	3.79	6.84	5.64	7.64	1.32	4.58
DURABLE GOODS	25098	21523	21515	21829	21726	21691	22313	22306	22511	23200	23691	22283	21890	22927
% CHG PREV QTR SAAR	104.18	-45.91	-0.15	5.96	-1.87	-0.66	11.99	-0.13	3.72	12.83	8.73	10.89	-1.76	4.74
% CHG SAME QTR LAST YR	26.67	6.56	4.08	3.97	-13.43	0.78	3.71	2.19	3.61	6.96	6.17	10.89	-1.76	4.74
NONDURABLE GOODS	18741	18950	19104	19517	19561	19777	20038	19879	20330	21076	21033	18837	19723	20580
% CHG PREV QTR SAAR	4.10	4.54	3.30	8.93	0.89	4.51	5.37	-3.13	9.39	15.51	-0.83	4.18	4.71	4.34
% CHG SAME QTR LAST YR	4.86	3.78	4.45	5.20	4.38	4.37	4.89	1.85	3.93	6.57	4.96	4.18	4.71	4.34
TRADE	13780	13956	14070	14274	14300	14467	14788	14667	15159	15492	15883	13873	14457	15300
% CHG PREV QTR SAAR	2.82	5.20	3.29	5.94	0.73	4.76	9.18	-3.25	14.10	9.09	10.50	4.06	4.21	5.83
% CHG SAME QTR LAST YR	3.46	4.24	4.20	4.30	3.77	3.66	5.11	2.75	6.00	7.08	7.40	4.06	4.21	5.83
SERVICES	16567	16710	17136	17464	17462	17564	18894	17701	18315	19211	20464	16727	17846	18923
% CHG PREV QTR SAAR	1.77	3.48	10.60	7.88	-0.04	2.36	33.90	-22.96	14.61	21.05	28.75	3.53	6.69	6.03
% CHG SAME QTR LAST YR	3.18	3.39	4.19	5.87	5.40	5.11	10.26	1.36	4.88	9.37	8.31	3.53	6.69	6.03
FIN,INS,REAL EST	21500	21610	21965	21955	21991	22917	23164	21625	22778	22676	23321	21573	22507	22600
% CHG PREV QTR SAAR	5.48	2.06	6.75	-0.18	0.65	17.94	4.37	-24.04	23.09	-1.78	11.87	6.88	4.33	0.41
% CHG SAME QTR LAST YR	6.97	6.25	6.75	3.49	2.28	6.05	5.45	-1.50	3.58	-1.05	0.68	6.88	4.33	0.41
TRANS,COMM,PUB UTIL	24881	24787	25050	25229	25392	25941	26611	26035	26860	27188	27822	24803	25793	26976
% CHG PREV QTR SAAR	6.49	-1.49	4.31	2.88	2.62	8.93	10.74	-8.39	13.30	4.96	9.67	2.19	3.99	4.59
% CHG SAME QTR LAST YR	3.15	1.66	1.97	3.01	2.06	4.66	6.23	3.20	5.78	4.80	4.55	2.19	3.99	4.59
GOVERNMENT	18678	18815	19160	19568	19724	19929	20287	20811	20769	20821	20936	18761	19877	20834
% CHG PREV QTR SAAR	6.39	2.98	7.55	8.79	3.22	4.21	7.38	10.75	-0.80	1.00	2.23	2.95	5.95	4.82
% CHG SAME QTR LAST YR	0.75	5.49	4.06	6.40	5.60	5.92	5.88	6.35	5.30	4.48	3.20	2.95	5.95	4.82
FEDERAL,CIVILIAN	27079	27262	27388	28319	28641	28782	29041	29691	30132	30144	30249	27149	28696	30054
% CHG PREV QTR SAAR	3.21	2.73	1.86	14.32	4.62	1.99	3.65	9.26	6.08	0.15	1.41	-0.21	5.70	4.73
% CHG SAME QTR LAST YR	-1.71	1.17	1.76	5.41	5.77	5.58	6.04	4.84	5.21	4.73	4.16	-0.21	5.70	4.73
STATE AND LOCAL	16632	16753	17131	17413	17554	17773	18092	18574	18441	18588	18797	16701	17708	18600
% CHG PREV QTR SAAR	8.77	2.94	9.33	6.75	3.28	5.07	7.38	11.09	-2.83	3.23	4.57	4.68	6.03	5.04
% CHG SAVE QTR LAST YR	2.34	7.82	5.13	6.92	5.54	6.09	5.61	6.67	5.05	4.59	3.90	4.68	6.03	5.04

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989

TABLE 32: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY RATE
(CURRENT DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	18318	18037	18184	18870	18572	18767	19250	19355	19486	20017	20411	18137	18865	19817
% CHG SAME QTR LAST YR	6.52	4.56	4.26	4.79	1.39	4.05	5.86	2.57	4.92	6.66	6.03	4.78	4.01	5.05
MINING	22392	22180	21907	23850	23707	24356	23913	26173	24808	25652	25025	22304	23957	25415
% CHG SAME QTR LAST YR	1.39	4.04	0.62	4.90	5.87	9.81	9.16	9.74	4.64	5.32	4.65	1.99	7.41	6.09
CONSTRUCTION	18680	18471	19575	21366	19877	19093	20173	21907	21272	21467	22217	19262	20127	21716
% CHG SAME QTR LAST YR	4.60	7.06	8.21	5.14	6.41	3.36	3.05	2.53	7.02	12.43	10.13	6.14	4.49	7.89
MANUFACTURING	21774	20158	20257	20788	20573	20672	21126	21188	21365	22092	22316	20518	20790	21741
% CHG SAME QTR LAST YR	16.09	5.33	4.30	4.55	-5.52	2.55	4.29	1.93	3.85	6.87	5.64	7.63	1.32	4.57
DURABLE GOODS	24937	21533	21530	21932	21598	21708	22330	22389	22394	23234	23704	22281	21892	22930
% CHG SAME QTR LAST YR	26.73	6.67	4.11	3.83	-13.39	0.81	3.72	2.08	3.68	7.03	6.15	10.85	-1.74	4.74
NONDURABLE GOODS	18749	18851	19039	19671	19576	19687	19963	20023	20356	20978	20955	18837	19724	20578
% CHG SAME QTR LAST YR	4.87	3.88	4.39	5.15	4.41	4.44	4.85	1.79	3.98	6.56	4.97	4.18	4.71	4.33
TRADE	13809	13852	13820	14613	14329	14370	14523	15010	15189	15393	15596	13874	14459	15297
% CHG SAME QTR LAST YR	3.49	4.33	4.14	4.27	3.76	3.74	5.08	2.72	6.00	7.12	7.39	4.05	4.21	5.80
SERVICES	16439	16437	17188	17842	17328	17282	18948	18082	18176	18904	20522	16730	17850	18921
% CHG SAME QTR LAST YR	3.22	3.41	4.17	5.85	5.41	5.14	10.24	1.35	4.89	9.38	8.31	3.52	6.70	6.00
FIN,INS,REAL EST	21388	21439	22020	22192	21877	22741	23217	21857	22661	22505	23372	21573	22507	22598
% CHG SAME QTR LAST YR	6.94	6.30	6.72	3.48	2.29	6.07	5.44	-1.51	3.58	-1.04	0.67	6.88	4.33	0.41
TRANS,COMM,PUB UTIL	24879	24622	24818	25624	25412	25754	26395	26412	26895	26980	27619	24809	25796	26976
% CHG SAME QTR LAST YR	3.21	1.64	2.10	2.83	2.14	4.60	6.35	3.07	5.84	4.76	4.63	2.19	3.98	4.57
GOVERNMENT	18520	19518	18854	19355	19562	20661	19961	20591	20603	21581	20592	18768	19885	20842
% CHG SAME QTR LAST YR	0.77	5.41	4.05	6.47	5.63	5.86	5.87	6.38	5.32	4.45	3.16	2.99	5.95	4.81
FEDERAL,CIVILIAN	26759	27308	27730	28212	28315	28902	29406	29512	29802	30304	30628	27165	28709	30061
% CHG SAME QTR LAST YR	-1.67	1.45	1.83	5.02	5.81	5.84	6.04	4.61	5.25	4.85	4.16	-0.20	5.68	4.71
STATE AND LOCAL	16505	17531	16741	17194	17424	18573	17677	18356	18308	19411	18367	16708	17717	18610
% CHG SAME QTR LAST YR	2.35	7.60	5.11	7.10	5.57	5.94	5.59	6.76	5.07	4.51	3.90	4.72	6.04	5.04

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 33: TENNESSEE CIVILIAN LABOR FORCE AND UMEMPLOYMENT RATE

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
CIVILIAN LABOR FORCE (THOUS)....	2288	2313	2316	2271	2339	2386	2347	2319	2361	2378	2341	2290	2336	2350
% CHG SAME QTR LAST YR.....	1.16	1.25	2.34	1.22	2.26	3.19	1.34	2.12	0.94	-0.36	-0.24	1.64	2.01	0.60
EMPLOYED PERSONS (THOUS).....	2105	2131	2139	2101	2169	2234	2225	2186	2217	2235	2218	2106	2182	2214
% CHG SAME QTR LAST YR.....	1.41	1.55	2.00	2.52	3.04	4.83	3.99	4.07	2.21	0.07	-0.32	1.59	3.61	1.47
UNEMPLOYED PERSONS (THOUS).....	183	182	176	171	170	153	122	133	144	143	123	184	154	136
% CHG SAME QTR LAST YR.....	-1.74	-2.14	6.76	-12.50	-6.70	-16.01	-30.78	-21.94	-15.27	-6.56	1.24	2.22	-16.30	-11.69
PARTICIPATION RATE (THOUS).....	0.616	0.621	0.619	0.606	0.622	0.633	0.620	0.611	0.620	0.622	0.611	0.615	0.620	0.616
% CHG SAME QTR LAST YR.....	-0.06	0.01	1.10	-0.03	1.00	1.93	0.10	0.87	-0.29	-1.58	-1.46	0.42	0.76	-0.63
UNEMPLOYMENT RATE (PERCENT).....	8.0	7.9	7.6	7.5	7.3	6.4	5.2	5.7	6.1	6.0	5.3	8.0	6.6	5.8

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 34: TENNESSEE CIVILIAN LABOR FORCE AND UNEMPLOYMENT RATE
SEASONALLY ADJUSTED

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
CIVILIAN LABOR FORCE (THOUS)....	2281	2278	2322	2308	2332	2353	2349	2356	2356	2346	2344	2291	2336	2350
% CHG PREV QTR SAAR.....	-0.33	-0.49	8.05	-2.44	4.26	3.60	-0.74	1.25	-0.07	-1.66	-0.32	1.66	1.95	0.63
% CHG SAME QTR LAST YR.....	1.12	1.35	2.49	1.12	2.26	3.30	1.13	2.07	1.00	-0.31	-0.21	1.66	1.95	0.63
EMPLOYED PERSONS (THOUS).....	2104	2101	2126	2143	2168	2205	2213	2227	2217	2207	2206	2106	2182	2214
% CHG PREV QTR SAAR.....	2.04	-0.51	4.82	3.17	4.80	6.85	1.50	2.66	-1.88	-1.79	-0.09	1.59	3.60	1.47
% CHG SAME QTR LAST YR.....	1.43	1.66	2.05	2.36	3.05	4.90	4.06	3.93	2.24	0.10	-0.29	1.59	3.60	1.47
UNEMPLOYED PERSONS (THOUS).....	177	176	196	165	164	149	136	129	139	139	138	185	153	136
% CHG PREV QTR SAAR.....	-23.98	-0.14	52.48	-49.72	-2.53	-32.77	-29.75	-19.82	35.50	0.40	-3.85	2.41	-16.85	-11.33
% CHG SAME QTR LAST YR.....	-2.45	-2.11	7.48	-12.66	-7.06	-15.81	-30.64	-22.05	-15.36	-6.44	1.20	2.41	-16.85	-11.33
PARTICIPATION RATE.....	0.614	0.611	0.621	0.616	0.620	0.624	0.621	0.621	0.619	0.614	0.612	0.616	0.620	0.616
% CHG PREV QTR SAAR.....	-1.51	-1.76	6.72	-3.63	2.99	2.35	-1.99	0.03	-1.27	-2.89	-1.57	0.43	0.70	-0.60
% CHG SAME QTR LAST YR.....	-0.10	0.12	1.24	-0.12	1.00	2.04	-0.11	0.82	-0.24	-1.54	-1.43	0.43	0.70	-0.60
UNEMPLOYMENT RATE (PERCENT).....	7.7	7.7	8.4	7.2	7.0	6.3	5.8	5.5	5.9	5.9	5.9	8.1	6.6	5.8

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 35: TENNESSEE TAXABLE SALES
(MILLIONS OF CURRENT DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	8681	8948	9328	7728	9243	9523	9892	8379	9920	9926	10313	34309	36386	38538
% CHG SAME QTR LAST YR	6.8	7.8	9.0	5.1	6.5	6.4	6.0	8.4	7.3	4.2	4.3	7.8	6.1	5.9
AUTO DEALERS	972	1158	990	904	1128	1276	1015	1089	1251	1201	995	3961	4323	4536
% CHG SAME QTR LAST YR	9.6	18.7	23.9	7.5	16.1	10.2	2.4	20.5	10.9	-5.9	-1.9	15.7	9.1	4.9
PURCHASES FROM MANUFACTURERS	669	763	655	558	637	683	669	620	705	703	730	2788	2547	2757
% CHG SAME QTR LAST YR	-0.1	5.3	-9.1	-20.3	-4.7	-10.6	2.1	11.0	10.5	3.0	9.1	4.4	-8.6	8.3
MISC DURABLE GOODS	1592	1525	1501	1267	1636	1655	1602	1335	1728	1679	1593	5804	6160	6335
% CHG SAME QTR LAST YR	10.1	7.1	8.7	6.9	2.8	8.5	6.7	5.4	5.6	1.4	-0.6	9.2	6.1	2.8
EATING AND DRINKING PLACES	646	673	657	601	717	730	699	635	759	800	748	2504	2746	2942
% CHG SAME QTR LAST YR	9.5	12.7	16.4	13.7	10.9	8.5	6.4	5.7	5.9	9.6	7.0	10.8	9.7	7.1
FOOD STORES	1310	1331	1309	1244	1403	1452	1413	1304	1480	1488	1423	5130	5512	5695
% CHG SAME QTR LAST YR	2.4	-0.2	3.1	5.4	7.1	9.1	8.0	4.8	5.5	2.5	0.7	0.8	7.4	3.3
LIQUOR STORES	69	68	85	59	58	57	78	58	59	58	77	277	253	251
% CHG SAME QTR LAST YR	19.7	18.2	17.3	8.3	-16.0	-15.4	-8.0	-0.6	0.5	0.6	-1.9	13.6	-8.6	-0.5
HOTELS AND MOTELS	221	222	183	146	221	247	190	165	237	265	217	753	804	883
% CHG SAME QTR LAST YR	35.2	9.8	15.1	15.8	0.2	11.0	3.4	12.8	7.0	7.3	14.4	17.5	6.8	9.9
OTHER RETAIL AND SERVICE	2100	2091	2691	1941	2311	2273	2906	2072	2478	2492	3053	8683	9431	10095
% CHG SAME QTR LAST YR	5.7	8.1	10.9	7.8	10.0	8.7	8.0	6.7	7.3	9.6	5.1	8.6	8.6	7.0
MISC NONDURABLE GOODS	759	775	903	662	769	782	938	724	816	831	1008	3073	3151	3378
% CHG SAME QTR LAST YR	3.1	8.1	7.3	3.9	1.4	1.0	3.9	9.4	6.0	6.3	7.4	5.1	2.5	7.2
TRANSPORTATION,COMMUNICATION	343	342	354	346	362	369	383	377	408	410	469	1338	1460	1665
% CHG SAME QTR LAST YR	9.8	2.2	9.5	15.5	5.7	7.9	8.4	9.1	12.8	11.2	22.5	6.1	9.2	14.0

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 36: TENNESSEE TAXABLE SALES
SEASONALLY ADJUSTED
(MILLIONS OF CURRENT DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	8428	8670	8835	8764	8986	9211	9363	9493	9658	9612	9745	34260	36324	38508
% CHG PREV QTR SAAR	4.9	12.0	7.8	-3.2	10.5	10.4	6.7	5.7	7.1	-1.9	5.7	7.9	6.0	6.0
% CHG SAME QTR LAST YR	6.7	7.4	9.2	5.2	6.6	6.2	6.0	8.3	7.5	4.3	4.1	7.9	6.0	6.0
AUTO DEALERS	923	1052	1081	975	1075	1148	1114	1176	1193	1075	1096	3960	4311	4540
% CHG PREV QTR SAAR	8.1	69.2	11.2	-33.8	47.8	30.1	-11.4	24.2	6.0	-34.0	7.9	16.0	8.9	5.3
% CHG SAME QTR LAST YR	9.9	16.6	25.3	7.7	16.5	9.1	3.1	20.6	11.0	-6.3	-1.6	16.0	8.9	5.3
PURCHASES FROM MANUFACTURERS	661	728	642	610	628	650	656	679	692	668	718	2794	2544	2757
% CHG PREV QTR SAAR	-43.9	47.1	-39.5	-18.4	12.1	14.8	4.2	14.2	8.3	-13.2	33.3	5.0	-8.9	8.4
% CHG SAME QTR LAST YR	-0.7	4.9	-8.7	-20.1	-5.0	-10.7	2.3	11.3	10.3	2.9	9.4	5.0	-8.9	8.4
MISC DURABLE GOODS	1463	1441	1484	1503	1506	1562	1584	1580	1595	1583	1575	5795	6156	6333
% CHG PREV QTR SAAR	16.8	-5.9	12.6	5.1	0.9	15.8	5.6	-0.9	3.9	-3.0	-2.0	9.3	6.2	2.9
% CHG SAME QTR LAST YR	10.2	7.1	8.6	6.8	3.0	8.4	6.7	5.1	5.9	1.3	-0.6	9.3	6.2	2.9
EATING AND DRINKING PLACES	615	633	663	670	684	686	705	707	725	752	753	2500	2745	2938
% CHG PREV QTR SAAR	19.1	12.2	20.1	4.2	8.7	1.6	11.2	1.4	10.6	15.5	0.8	10.6	9.8	7.1
% CHG SAME QTR LAST YR	9.6	12.9	16.1	13.7	11.1	8.4	6.3	5.6	6.1	9.6	6.9	10.6	9.8	7.1
FOOD STORES	1273	1273	1312	1341	1361	1391	1416	1407	1434	1428	1423	5130	5509	5692
% CHG PREV QTR SAAR	0.5	0.0	12.8	9.2	5.9	9.3	7.2	-2.6	8.1	-1.8	-1.3	0.8	7.4	3.3
% CHG SAME QTR LAST YR	2.3	-0.4	3.3	5.5	6.9	9.3	7.9	4.9	5.4	2.6	0.5	0.8	7.4	3.3
LIQUOR STORES	73	72	70	65	62	61	64	64	63	62	63	276	252	251
% CHG PREV QTR SAAR	127.1	-4.8	-11.9	-27.5	-16.3	-3.7	19.8	1.1	-11.0	-4.2	5.6	13.3	-8.5	-0.3
% CHG SAME QTR LAST YR	20.1	18.3	16.8	8.4	-15.5	-15.3	-8.5	-0.6	1.0	0.8	-2.3	13.3	-8.5	-0.3
HOTELS AND MOTELS	201	182	196	196	201	203	202	221	215	218	231	749	802	885
% CHG PREV QTR SAAR	92.6	-33.1	36.4	0.0	10.9	2.8	-1.7	42.7	-9.1	5.0	25.0	16.9	7.1	10.3
% CHG SAME QTR LAST YR	35.6	10.4	14.5	15.1	0.3	11.7	2.9	12.5	7.0	7.6	14.2	16.9	7.1	10.3
OTHER RETAIL AND SERVICE	2116	2171	2255	2280	2335	2353	2434	2433	2510	2578	2555	8655	9402	10075
% CHG PREV QTR SAAR	0.6	10.6	16.5	4.5	10.0	3.2	14.4	-0.2	13.3	11.3	-3.5	8.5	8.6	7.2
% CHG SAME QTR LAST YR	5.8	7.8	10.9	7.9	10.3	8.4	7.9	6.7	7.5	9.5	5.0	8.5	8.6	7.2
MISC NONDURABLE GOODS	764	782	786	760	777	792	812	831	827	842	871	3065	3142	3371
% CHG PREV QTR SAAR	18.0	10.2	2.0	-12.5	9.2	8.0	10.6	9.4	-1.7	7.3	14.5	4.9	2.5	7.3
% CHG SAME QTR LAST YR	3.2	8.4	6.9	3.8	1.8	1.3	3.3	9.3	6.5	6.3	7.2	4.9	2.5	7.3
TRANSPORTATION,COMMUNICATION,	339	336	346	364	358	364	375	396	403	406	460	1337	1461	1664
% CHG PREV QTR SAAR	33.5	-3.3	12.3	22.5	-7.0	7.0	13.5	23.9	7.2	2.6	65.1	6.1	9.3	13.9
% CHG SAME QTR LAST YR	9.6	2.2	9.6	15.5	5.5	8.2	8.5	8.8	12.7	11.5	22.5	6.1	9.3	13.9

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 37: TENNESSEE TAXABLE SALES
(MILLIONS OF 1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	7648	7801	8056	6571	7754	7903	8122	6840	8006	7935	8152	29988	30350	30933
% CHG SAME QTR LAST YR	4.6	5.3	6.5	1.4	1.4	1.3	0.8	4.1	3.3	0.4	0.4	5.3	1.2	1.9
AUTO DEALERS	856	1010	855	769	946	1059	833	889	1009	960	786	3463	3607	3645
% CHG SAME QTR LAST YR	7.4	15.9	21.0	3.7	10.5	4.9	-2.6	15.7	6.7	-9.3	-5.6	12.9	4.2	1.1
PURCHASES FROM MANUFACTURERS	589	666	566	475	535	566	549	506	569	562	577	2439	2125	2214
% CHG SAME QTR LAST YR	-2.2	2.8	-11.2	-23.2	-9.2	-14.9	-2.9	6.5	6.3	-0.8	5.1	2.0	-12.9	4.2
MISC DURABLE GOODS	1403	1330	1296	1078	1373	1373	1315	1090	1395	1342	1259	5074	5138	5086
% CHG SAME QTR LAST YR	7.8	4.6	6.2	3.1	-2.1	3.3	1.5	1.2	1.6	-2.3	-4.3	6.6	1.3	-1.0
EATING AND DRINKING PLACES	569	586	567	511	601	606	574	518	612	640	592	2189	2292	2362
% CHG SAME QTR LAST YR	7.3	10.0	13.7	9.7	5.6	3.3	1.2	1.5	1.8	5.6	3.0	8.2	4.7	3.1
FOOD STORES	1154	1160	1130	1058	1177	1205	1160	1064	1195	1189	1125	4486	4600	4573
% CHG SAME QTR LAST YR	0.3	-2.6	0.7	1.6	2.0	3.8	2.7	0.6	1.5	-1.3	-3.1	-1.6	2.6	-0.6
LIQUOR STORES	61	59	73	50	49	48	64	48	47	46	61	242	211	202
% CHG SAME QTR LAST YR	17.3	15.4	14.6	4.5	-20.0	-19.5	-12.6	-4.5	-3.3	-3.1	-5.6	10.9	-12.8	-4.2
HOTELS AND MOTELS	195	194	158	124	186	205	156	135	191	211	171	658	670	709
% CHG SAME QTR LAST YR	32.5	7.2	12.5	11.7	-4.6	5.7	-1.7	8.3	2.9	3.4	10.2	14.8	1.9	5.7
OTHER RETAIL AND SERVICE	1850	1823	2324	1651	1938	1886	2386	1691	2000	1992	2414	7585	7861	8097
% CHG SAME QTR LAST YR	3.6	5.6	8.3	4.0	4.8	3.5	2.7	2.5	3.2	5.6	1.2	6.0	3.6	3.0
MISC NONDURABLE GOODS	668	675	780	563	646	649	770	591	659	664	796	2685	2627	2710
% CHG SAME QTR LAST YR	1.0	5.5	4.8	0.2	-3.4	-3.9	-1.3	5.0	2.0	2.3	3.5	2.6	-2.2	3.2
TRANSPORTATION,COMMUNICATION	302	298	305	294	304	306	315	308	330	328	371	1169	1219	1337
% CHG SAME QTR LAST YR	7.6	-0.2	6.9	11.4	0.7	2.7	3.1	4.7	8.5	7.1	18.0	3.6	4.2	9.7

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

QUARTERLY UPDATE SEPTEMBER 1989
TABLE 38: TENNESSEE TAXABLE SALES
SEASONALLY ADJUSTED
(MILLIONS OF 1982 DOLLARS)

	HISTORICAL - DATA											ANNUAL		
	198602	198603	198604	198701	198702	198703	198704	198801	198802	198803	198804	1986	1987	1988
TOTAL	7425	7559	7629	7452	7539	7644	7687	7749	7795	7683	7704	29957	30322	30932
% CHG PREV QTR SAAR	4.5	7.4	3.8	-9.0	4.7	5.7	2.2	3.3	2.4	-5.6	1.1	5.3	1.2	2.0
% CHG SAME QTR LAST YR	4.5	4.9	6.7	1.5	1.5	1.1	0.8	4.0	3.4	0.5	0.2	5.3	1.2	2.0
AUTO DEALERS	813	917	933	829	902	953	914	960	963	860	866	3461	3597	3649
% CHG PREV QTR SAAR	7.7	62.2	7.1	-37.7	40.0	24.5	-15.1	21.4	1.3	-36.5	3.2	13.2	3.9	1.4
% CHG SAME QTR LAST YR	7.7	13.9	22.4	3.9	10.9	3.8	-2.0	15.8	6.8	-9.8	-5.2	13.2	3.9	1.4
PURCHASES FROM MANUFACTURERS	582	634	554	519	527	539	539	554	559	534	568	2444	2123	2215
% CHG PREV QTR SAAR	-44.1	41.0	-41.8	-23.3	6.2	10.0	-0.2	11.7	3.5	-16.5	27.5	2.6	-13.1	4.3
% CHG SAME QTR LAST YR	-2.7	2.5	-10.9	-23.0	-9.6	-15.0	-2.7	6.8	6.1	-0.9	5.3	2.6	-13.1	4.3
MISC DURABLE GOODS	1289	1256	1282	1278	1264	1297	1300	1290	1287	1265	1245	5068	5139	5088
% CHG PREV QTR SAAR	16.4	-9.7	8.4	-1.2	-4.4	10.9	1.2	-3.2	-0.8	-6.7	-6.3	6.7	1.4	-1.0
% CHG SAME QTR LAST YR	8.0	4.6	6.1	3.0	-2.0	3.2	1.5	0.9	1.9	-2.4	-4.3	6.7	1.4	-1.0
EATING AND DRINKING PLACES	542	552	572	569	574	570	579	577	585	601	596	2186	2291	2360
% CHG PREV QTR SAAR	18.7	7.6	15.6	-2.0	3.0	-2.7	6.5	-0.9	5.7	11.1	-3.6	8.0	4.8	3.0
% CHG SAME QTR LAST YR	7.3	10.3	13.4	9.7	5.8	3.2	1.1	1.4	2.1	5.5	2.9	8.0	4.8	3.0
FOOD STORES	1122	1110	1133	1141	1142	1155	1162	1148	1158	1141	1125	4486	4599	4572
% CHG PREV QTR SAAR	0.1	-4.2	8.6	2.7	0.4	4.7	2.7	-4.8	3.3	-5.5	-5.6	-1.6	2.5	-0.6
% CHG SAME QTR LAST YR	0.2	-2.7	0.9	1.7	1.8	4.0	2.6	0.7	1.4	-1.2	-3.2	-1.6	2.5	-0.6
LIQUOR STORES	65	63	61	55	52	51	53	53	50	49	50	241	211	202
% CHG PREV QTR SAAR	126.3	-8.7	-15.2	-31.8	-20.7	-7.8	14.8	-1.2	-14.9	-7.9	1.0	10.6	-12.6	-4.1
% CHG SAME QTR LAST YR	17.7	15.5	14.0	4.5	-19.6	-19.4	-13.0	-4.6	-2.9	-2.9	-6.0	10.6	-12.6	-4.1
HOTELS AND MOTELS	177	158	169	167	169	168	166	180	174	174	182	655	670	711
% CHG PREV QTR SAAR	91.9	-35.9	31.3	-6.0	5.1	-1.5	-5.8	39.5	-13.2	1.1	19.6	14.1	2.3	6.1
% CHG SAME QTR LAST YR	32.9	7.8	11.8	11.0	-4.5	6.3	-2.2	8.0	3.0	3.6	10.0	14.1	2.3	6.1
OTHER RETAIL AND SERVICE	1865	1892	1947	1939	1959	1953	1998	1986	2026	2061	2020	7568	7849	8092
% CHG PREV QTR SAAR	0.2	6.1	12.1	-1.7	4.2	-1.2	9.6	-2.5	8.3	7.1	-7.7	5.9	3.7	3.1
% CHG SAME QTR LAST YR	3.6	5.2	8.3	4.0	5.1	3.2	2.6	2.4	3.4	5.5	1.1	5.9	3.7	3.1
MISC NONDURABLE GOODS	673	682	679	646	652	657	667	678	668	673	689	2680	2623	2708
% CHG PREV QTR SAAR	17.6	5.6	-1.9	-17.8	3.4	3.4	6.0	7.0	-6.1	3.2	9.5	2.4	-2.1	3.2
% CHG SAME QTR LAST YR	1.1	5.8	4.4	0.1	-3.1	-3.6	-1.7	4.9	2.4	2.4	3.2	2.4	-2.1	3.2
TRANSPORTATION,COMMUNICATION	299	293	299	310	300	302	308	323	325	324	363	1169	1220	1336
% CHG PREV QTR SAAR	33.0	-7.2	8.1	15.2	-11.9	2.4	8.8	21.1	2.5	-1.3	57.9	3.6	4.4	9.6
% CHG SAME QTR LAST YR	7.4	-0.2	7.1	11.3	0.5	3.0	3.1	4.4	8.4	7.4	17.9	3.6	4.4	9.6

SOURCE:QUARTERLY TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 1: TENNESSEE SELECTED INDICATORS

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TN GROSS STATE PRODUCT (MIL. DOL.)..	42235	45019	49879	51965	56318	63206	67562	72328	78946	84010
PERCENTAGE CHANGE.....	10.30	6.59	10.80	4.18	8.38	12.23	6.89	7.05	9.15	6.41
TN GROSS STATE PRODUCT (MIL 82 $)...	53054.1	51959.4	52825.7	51965.0	54199.3	58760.3	61319.5	63758.1	67799.2	70025.5
PERCENTAGE CHANGE.....	1.96	-2.06	1.67	-1.63	4.30	8.42	4.36	3.98	6.34	3.28
US GROSS NATIONAL PRODUCT (BIL 82 $)	3192.4	3187.1	3248.8	3166.0	3279.1	3501.4	3618.7	3717.9	3853.7	4024.3
PERCENTAGE CHANGE.....	2.48	-0.17	1.94	-2.55	3.57	6.78	3.35	2.74	3.65	4.43
TN PERSONAL INCOME (MIL. DOL.).....	33508	36958	40872	42970	45745	50362	53637	57801	62523	67243
PERCENTAGE CHANGE.....	12.22	10.30	10.59	5.13	6.46	10.09	6.50	7.76	8.17	7.55
TN PERSONAL INCOME (MIL 82 $).....	42866.6	42670.7	43200.4	42970.3	43933.5	46607.2	48043.0	50548.7	52200.1	54024.0
PERCENTAGE CHANGE.....	2.75	-0.46	1.24	-0.53	2.24	6.09	3.08	5.22	3.27	3.49
US PERSONAL INCOME (BIL 82 $).....	2602.1	2607.6	2664.5	2670.8	2726.2	2876.9	2978.5	3083.8	3153.9	3265.3
PERCENTAGE CHANGE.....	2.75	0.21	2.18	0.24	2.07	5.53	3.53	3.53	2.27	3.53
TN EMPLOYED PERSONS (THOUS).....	1921.0	1928.0	1924.0	1877.0	1930.0	2030.0	2073.0	2106.0	2182.0	2214.0
PERCENTAGE CHANGE.....	3.73	0.36	-0.21	-2.44	2.82	5.18	2.12	1.59	3.61	1.47
US EMPLOYED PERSONS (MIL).....	98.8	99.3	100.4	99.5	100.8	105.0	107.2	109.6	112.4	115.0
PERCENTAGE CHANGE.....	2.89	0.48	1.10	-0.87	1.31	4.14	2.04	2.28	2.59	2.25
TN UNEMPLOYMENT RATE.....	5.8	7.3	9.1	11.8	11.5	8.6	8.0	8.0	6.6	5.8
US UNEMPLOYMENT RATE.....	5.8	7.1	7.6	9.7	9.6	7.5	7.2	7.0	6.2	5.5
IMPLICIT DEFLATOR.GSP.....	79.6	86.6	94.4	100.0	103.9	107.6	110.2	113.4	116.4	120.0
PERCENTAGE CHANGE.....	8.18	8.84	8.98	5.91	3.91	3.52	2.43	2.96	2.64	3.03
IMPLICIT DEFLATOR.GNP.....	78.6	85.7	94.0	100.0	103.9	107.7	110.9	113.8	117.4	121.3
PERCENTAGE CHANGE.....	8.86	9.03	9.68	6.38	3.90	3.66	2.97	2.61	3.16	3.28
TN MFG OUTPUT/EMPLOYEE (THOUS 82 $).	26.8	26.6	27.7	28.8	31.7	33.9	35.5	36.9	38.4	39.7
PERCENTAGE CHANGE.....	1.47	-0.66	3.84	4.00	10.27	6.91	4.79	3.76	3.99	3.43
US MFG OUTPUT/EMPLOYEE (THOUS 82 $).	33.1	32.8	33.5	33.8	36.6	39.1	40.8	42.4	44.0	46.0
PERCENTAGE CHANGE.....	-0.60	-0.99	2.19	0.81	8.44	6.74	4.44	3.86	3.78	4.57
TN PER CAPITA INCOME ($).....	7392	8029	8811	9209	9752	10652	11252	12039	12875	13737
PERCENTAGE CHANGE.....	10.46	8.62	9.73	4.53	5.89	9.23	5.63	7.00	6.94	6.69
TN POPULATION (THOUS.).....	4533	4603	4639	4666	4691	4728	4767	4801	4856	4895
PERCENTAGE CHANGE.....	1.59	1.54	0.78	0.58	0.54	0.79	0.82	0.71	1.15	0.80

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 2: TENNESSEE GROSS STATE PRODUCT BY SECTOR
(MILLIONS OF DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
GROSS STATE PRODUCT	42235	45019	49879	51965	56318	63206	67562	72328	78946	84010
PERCENTAGE CHANGE	10.30	6.59	10.80	4.18	8.38	12.23	6.89	7.05	9.15	6.41
MANUFACTURING	11558	11917	13480	13439	14926	16947	17336	18096	19080	21031
PERCENTAGE CHANGE	7.56	3.11	13.12	-0.30	11.06	13.54	2.30	4.38	5.44	10.23
DURABLE GOODS	5497	5434	6185	5903	6737	8827	9117	9498	9977	10854
PERCENTAGE CHANGE	7.74	-1.15	13.82	-4.56	14.13	31.02	3.29	4.18	5.04	8.79
NONDURABLE GOODS	6061	6483	7295	7536	8189	8120	8219	8598	9103	10177
PERCENTAGE CHANGE	7.39	6.96	12.53	3.30	8.67	-0.84	1.22	4.61	5.87	11.79
CONSTRUCTION	2094	2081	2022	2111	2203	2576	2847	3188	3481	3416
PERCENTAGE CHANGE	9.29	-0.62	-2.84	4.40	4.36	17.02	10.43	11.98	9.18	-1.86
MINING	346	382	401	365	358	362	371	351	374	383
PERCENTAGE CHANGE	1.17	10.40	4.97	-8.98	-1.92	1.12	2.49	-5.39	6.44	2.55
TRADE	7939	8215	8881	9371	10078	11418	12550	13464	15016	15641
PERCENTAGE CHANGE	10.97	3.48	8.11	5.52	7.54	13.30	9.91	7.28	11.53	4.16
SERVICES	5080	5781	6548	7182	7971	9119	10109	11135	12495	13203
PERCENTAGE CHANGE	13.27	13.80	13.27	9.68	10.99	14.40	10.86	10.15	12.21	5.67
FINANCE,INSURANCE AND REAL ESTATE.	5056	5655	6343	7058	7946	8515	9189	10326	11527	12004
PERCENTAGE CHANGE	12.61	11.85	12.17	11.27	12.58	7.16	7.92	12.37	11.63	4.14
TRANS.,COMM.,AND PUBLIC UTIL	3053	3383	3722	3864	4289	4847	5254	5614	6024	6235
PERCENTAGE CHANGE	9.07	10.81	10.02	3.82	11.00	13.01	8.40	6.85	7.30	3.51
GOVERNMENT	5768	6256	6817	6893	7244	7677	8324	8771	9397	10461
PERCENTAGE CHANGE	10.46	8.46	8.97	1.11	5.09	5.98	8.43	5.37	7.14	11.32
FEDERAL CIVILIAN	2227	2362	2683	2539	2609	2713	2902	2935	3115	3479
PERCENTAGE CHANGE	12.30	6.06	13.59	-5.37	2.76	3.99	6.97	1.14	6.15	11.68
FEDERAL MILITARY	279	330	370	401	420	440	455	452	474	518
PERCENTAGE CHANGE	4.89	18.28	12.12	8.38	4.74	4.76	3.41	-0.66	4.90	9.31
STATE AND LOCAL	3262	3564	3764	3953	4215	4524	4966	5383	5808	6463
PERCENTAGE CHANGE	9.76	9.26	5.61	5.02	6.63	7.33	9.77	8.40	7.89	11.28
AGRICULTURE	1341	1349	1665	1682	1303	1743	1582	1383	1553	1636
PERCENTAGE CHANGE	18.05	0.60	23.42	1.02	-22.53	33.77	-9.24	-12.58	12.32	5.29
FARM	1210	1211	1507	1515	1102	1534	1395	1184	1334	1392
PERCENTAGE CHANGE	18.86	0.08	24.44	0.53	-27.26	39.20	-9.06	-15.13	12.71	4.31
OTHER	131	138	158	167	201	209	187	199	219	244
PERCENTAGE CHANGE	11.02	5.34	14.49	5.70	20.36	3.98	-10.53	6.42	10.00	11.31
PER CAPITA GROSS STATE PRODUCT ($)	9317	9780	10752	11137	12006	13368	14173	15065	16257	17162
PERCENTAGE CHANGE	8.58	4.97	9.94	3.58	7.80	11.35	6.02	6.30	7.91	5.57

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 3: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL DURABLE GOODS	5497	5434	6185	5903	6737	8827	9117	9498	9977	10854
PERCENTAGE CHANGE	7.74	-1.15	13.82	-4.56	14.13	31.02	3.29	4.18	5.04	8.79
LUMBER AND WOOD PRODUCTS	372	350	327	301	397	450	440	480	593	595
PERCENTAGE CHANGE	14.81	-5.91	-6.57	-7.95	31.89	13.35	-2.22	9.09	23.49	0.33
FURNITURE AND FIXTURES	347	332	366	386	452	538	582	580	601	706
PERCENTAGE CHANGE	-1.14	-4.32	10.24	5.46	17.10	19.03	8.18	-0.34	3.66	17.43
STONE,CLAY AND GLASS	436	400	404	380	456	586	631	671	726	718
PERCENTAGE CHANGE	0.23	-8.26	1.00	-5.94	20.00	28.51	7.68	6.34	8.15	-1.10
PRIMARY METALS	554	520	506	427	399	505	494	542	571	668
PERCENTAGE CHANGE	5.52	-6.14	-2.69	-15.61	-6.56	26.57	-2.18	9.72	5.28	17.11
FABRICATED METAL PRODUCTS	771	798	855	795	846	1365	1432	1490	1571	1742
PERCENTAGE CHANGE	12.55	3.50	7.14	-7.02	6.42	61.35	4.91	4.05	5.41	10.88
NONELECTRICAL MACHINERY	1254	1327	1579	1408	1444	1776	1850	1869	1860	2038
PERCENTAGE CHANGE	12.16	5.82	18.99	-10.83	2.56	22.99	4.17	1.03	-0.46	9.54
ELECTRICAL MACHINERY	872	942	1128	1041	1162	1367	1415	1432	1503	1746
PERCENTAGE CHANGE	9.27	8.03	19.75	-7.71	11.62	17.64	3.51	1.20	4.93	16.18
TRANSPORTATION EQUIPMENT	565	406	568	705	1101	1615	1581	1700	1793	1815
PERCENTAGE CHANGE	-0.70	-28.14	39.90	24.12	56.17	46.68	-2.11	7.53	5.46	1.24
INSTRUMENTS	120	138	174	208	234	289	341	366	365	380
PERCENTAGE CHANGE	7.14	15.00	26.09	19.54	12.50	23.50	17.99	7.33	-0.39	4.12
MISCELLANEOUS DURABLE GOODS	206	221	278	252	246	336	351	368	395	447
PERCENTAGE CHANGE	11.35	7.28	25.79	-9.35	-2.38	36.59	4.46	4.84	7.46	13.14

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 4: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL NONDURABLE GOODS	6061	6483	7295	7536	8189	8120	8219	8598	9103	10177
PERCENTAGE CHANGE	7.39	6.96	12.53	3.30	8.67	-0.84	1.22	4.61	5.87	11.79
FOOD	1047	1159	1311	1457	1519	1609	1737	1775	1830	2031
PERCENTAGE CHANGE	6.95	10.70	13.11	11.14	4.26	5.92	7.96	2.19	3.11	10.97
TEXTILES	383	415	456	438	512	538	484	528	554	559
PERCENTAGE CHANGE	0.52	8.36	9.88	-3.95	16.89	5.08	-10.04	9.09	4.84	1.05
APPAREL	745	811	897	875	989	980	953	991	1074	1138
PERCENTAGE CHANGE	5.08	8.86	10.60	-2.45	13.03	-0.91	-2.76	3.99	8.37	5.94
PAPER	630	651	703	771	798	929	988	1057	1210	1398
PERCENTAGE CHANGE	14.96	3.33	7.99	9.67	3.50	16.42	6.35	6.98	14.47	15.57
PRINTING AND PUBLISHING	424	466	531	585	680	736	800	871	919	986
PERCENTAGE CHANGE	11.29	9.91	13.95	10.17	16.24	8.24	8.70	8.88	5.46	7.33
CHEMICALS	1725	1824	2046	2136	2283	1755	1705	1746	1891	2175
PERCENTAGE CHANGE	9.66	5.74	12.17	4.40	6.88	-23.13	-2.85	2.40	8.32	14.99
RUBBER AND PLASTICS	665	606	723	707	823	959	983	1089	1102	1250
PERCENTAGE CHANGE	6.91	-8.87	19.31	-2.21	16.41	16.52	2.50	10.78	1.21	13.38
LEATHER	325	416	471	369	325	304	239	207	209	223
PERCENTAGE CHANGE	-4.69	28.00	13.22	-21.66	-11.92	-6.46	-21.38	-13.39	1.20	6.31
OTHER NONDURABLE GOODS	117	135	157	198	260	310	330	334	314	418
PERCENTAGE CHANGE	6.36	15.38	16.30	26.11	31.31	19.23	6.45	1.21	-5.94	32.89

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 5: TENNESSEE GROSS STATE PRODUCT BY SECTOR
(MILLIONS OF 1982 DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
GROSS STATE PRODUCT	53054.1	51959.4	52825.7	51965.0	54199.3	58760.3	61319.5	63758.1	67799.2	70025.5
PERCENTAGE CHANGE	1.96	-2.06	1.67	-1.63	4.30	8.42	4.36	3.98	6.34	3.28
MANUFACTURING	14071.0	13375.3	14023.2	13439.0	14865.1	16859.6	17501.0	18088.4	19077.0	20158.3
PERCENTAGE CHANGE	1.22	-4.94	4.84	-4.17	10.61	13.42	3.80	3.36	5.47	5.67
DURABLE GOODS	6677.0	6131.8	6492.5	5903.0	6839.2	9198.6	9947.1	10472.4	11092.4	11907.4
PERCENTAGE CHANGE	0.75	-8.17	5.88	-9.08	15.86	34.50	8.14	5.28	5.92	7.35
NONDURABLE GOODS	7394.0	7243.6	7530.7	7536.0	8025.9	7661.0	7554.0	7616.0	7984.6	8251.0
PERCENTAGE CHANGE	1.65	-2.04	3.96	0.07	6.50	-4.55	-1.40	0.82	4.84	3.34
CONSTRUCTION	2766.2	2442.5	2153.4	2111.0	2170.4	2393.7	2523.9	2704.0	2800.2	2698.5
PERCENTAGE CHANGE	-5.58	-11.70	-11.84	-1.97	2.82	10.29	5.44	7.13	3.56	-3.63
MINING	619.0	482.9	390.1	365.0	379.6	403.1	422.6	495.1	513.9	516.2
PERCENTAGE CHANGE	-20.73	-21.98	-19.23	-6.43	4.01	6.18	4.82	17.16	3.80	0.45
TRADE	9769.1	9368.1	9325.8	9371.0	9821.3	10765.8	11636.0	12393.3	13384.8	13791.7
PERCENTAGE CHANGE	1.52	-4.11	-0.45	0.48	4.80	9.62	8.08	6.51	8.00	3.04
SERVICES	6640.5	6841.4	7164.1	7182.0	7526.9	8077.1	8523.6	9001.6	9618.8	9917.2
PERCENTAGE CHANGE	3.94	3.03	4.72	0.25	4.80	7.31	5.53	5.61	6.86	3.10
FINANCE,INSURANCE AND REAL ESTATE.	6391.9	6552.7	6690.9	7058.0	7243.4	7528.7	7532.0	7834.6	8316.5	8482.8
PERCENTAGE CHANGE	4.92	2.52	2.11	5.49	2.63	3.94	0.04	4.02	6.15	2.00
TRANS.,COMM.,AND PUBLIC UTIL	4144.2	4122.4	4090.2	3864.0	4032.4	4382.0	4578.4	4731.7	5157.3	5518.5
PERCENTAGE CHANGE	4.50	-0.53	-0.78	-5.53	4.36	8.67	4.48	3.35	9.00	7.00
GOVERNMENT	7430.0	7447.0	7398.0	6893.0	6845.0	6810.0	6970.0	7040.0	7323.6	7389.8
PERCENTAGE CHANGE	3.29	0.23	-0.66	-6.83	-0.70	-0.51	2.35	1.00	4.03	0.90
FEDERAL CIVILIAN	2896.0	2849.2	2894.3	2539.0	2496.7	2441.9	2486.7	2485.2	2557.8	2561.9
PERCENTAGE CHANGE	4.27	-1.61	1.58	-12.28	-1.67	-2.19	1.83	-0.06	2.92	0.16
FEDERAL MILITARY	362.8	398.1	399.1	401.0	401.9	396.0	389.9	382.7	389.3	381.6
PERCENTAGE CHANGE	-2.61	9.72	0.27	0.47	0.23	-1.46	-1.55	-1.84	1.72	-1.97
STATE AND LOCAL	4171.4	4197.9	4104.7	3953.0	3946.6	3971.9	4131.4	4258.7	4376.6	4446.3
PERCENTAGE CHANGE	3.30	0.64	-2.22	-3.70	-0.16	0.64	4.02	3.08	2.77	1.59
AGRICULTURE	1222.2	1327.1	1590.1	1682.0	1315.2	1540.3	1632.0	1469.6	1607.1	1552.5
PERCENTAGE CHANGE	5.35	8.58	19.82	5.78	-21.81	17.12	5.95	-9.95	9.36	-3.40
FARM	1088.1	1186.1	1431.1	1515.0	1139.6	1352.7	1470.0	1314.1	1450.5	1394.8
PERCENTAGE CHANGE	5.61	9.00	20.66	5.86	-24.78	18.70	8.67	-10.60	10.38	-3.84
OTHER	134.1	141.0	159.0	167.0	175.5	187.6	162.0	155.5	156.6	157.6
PERCENTAGE CHANGE	3.29	5.13	12.76	5.06	5.12	6.87	-13.63	-4.06	0.71	0.67
PER CAPITA GROSS STATE PRODUCT ($)	11704.0	11288.2	11387.3	11136.9	11553.9	12428.1	12863.3	13280.2	13961.9	14305.5
PERCENTAGE CHANGE	0.36	-3.55	0.88	-2.20	3.74	7.57	3.50	3.24	5.13	2.46

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 6: TENNESSEE DURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1982 DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL DURABLE GOODS	6677.0	6131.8	6492.5	5903.0	6839.2	9198.6	9947.1	10472.4	11092.4	11907.4
PERCENTAGE CHANGE	0.75	-8.17	5.88	-9.08	15.86	34.50	8.14	5.28	5.92	7.35
LUMBER AND WOOD PRODUCTS	375.0	383.4	360.5	301.0	350.1	401.8	397.8	418.1	503.2	484.7
PERCENTAGE CHANGE	13.89	2.23	-5.95	-16.51	16.31	14.77	-0.98	5.10	20.35	-3.68
FURNITURE AND FIXTURES	444.3	393.8	399.6	386.0	441.0	511.9	519.6	492.8	502.7	558.6
PERCENTAGE CHANGE	-8.23	-11.36	1.46	-3.39	14.24	16.08	1.51	-5.17	2.01	11.12
STONE,CLAY AND GLASS	519.7	443.5	419.5	380.0	444.9	551.8	575.7	574.0	610.8	603.3
PERCENTAGE CHANGE	-7.42	-14.66	-5.40	-9.42	17.07	24.03	4.34	-0.30	6.42	-1.22
PRIMARY METALS	609.5	544.5	489.4	427.0	394.7	482.8	484.8	550.8	537.8	558.1
PERCENTAGE CHANGE	-6.55	-10.66	-10.13	-12.74	-7.57	22.33	0.41	13.62	-2.36	3.77
FABRICATED METAL PRODUCTS	946.0	909.9	899.1	795.0	869.5	1384.4	1406.7	1431.3	1522.0	1598.1
PERCENTAGE CHANGE	5.10	-3.82	-1.19	-11.57	9.37	59.22	1.61	1.75	6.33	5.00
NONELECTRICAL MACHINERY	1487.5	1459.8	1622.8	1408.0	1665.5	2387.1	3008.1	3404.4	3684.1	4140.8
PERCENTAGE CHANGE	4.85	-1.86	11.16	-13.24	18.29	43.33	26.02	13.17	8.22	12.39
ELECTRICAL MACHINERY	1064.7	1074.1	1194.9	1041.0	1137.0	1323.3	1372.5	1375.6	1457.4	1653.5
PERCENTAGE CHANGE	7.67	0.88	11.25	-12.88	9.22	16.39	3.71	0.23	5.95	13.46
TRANSPORTATION EQUIPMENT	788.2	531.5	634.7	705.0	1071.5	1528.2	1472.0	1501.6	1532.6	1522.1
PERCENTAGE CHANGE	-7.35	-32.57	19.42	11.07	51.99	42.62	-3.68	2.01	2.07	-0.68
INSTRUMENTS	163.7	158.6	185.1	208.0	227.2	272.1	326.6	345.6	342.3	352.3
PERCENTAGE CHANGE	8.17	-3.11	16.70	12.37	9.22	19.78	20.03	5.81	-0.95	2.90
MISCELLANEOUS DURABLE GOODS	278.4	232.6	286.9	252.0	237.9	355.2	383.2	378.2	399.4	435.8
PERCENTAGE CHANGE	-4.15	-16.43	23.33	-12.16	-5.59	49.29	7.89	-1.30	5.61	9.12

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 7: TENNESSEE NONDURABLE GOODS MANUFACTURING GROSS PRODUCT
(MILLIONS OF 1982 DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL NONDURABLE GOODS	7394.0	7243.6	7530.7	7536.0	8025.9	7661.0	7554.0	7616.0	7984.6	8251.0
PERCENTAGE CHANGE	1.65	-2.04	3.96	0.07	6.50	-4.55	-1.40	0.82	4.84	3.34
FOOD	1200.7	1258.4	1317.6	1457.0	1456.4	1468.1	1569.1	1527.5	1575.0	1653.5
PERCENTAGE CHANGE	5.84	4.81	4.70	10.58	-0.04	0.80	6.88	-2.65	3.11	4.98
TEXTILES	416.3	445.8	452.8	438.0	502.9	516.8	459.2	481.8	494.2	473.6
PERCENTAGE CHANGE	-0.13	7.07	1.59	-3.28	14.83	2.76	-11.15	4.91	2.59	-4.18
APPAREL	910.8	951.9	972.9	875.0	965.8	962.7	920.8	931.4	1020.9	1048.4
PERCENTAGE CHANGE	1.22	4.51	2.21	-10.06	10.38	-0.33	-4.35	1.15	9.61	2.70
PAPER	767.4	693.3	689.2	771.0	826.1	879.7	902.3	941.2	1012.5	1067.6
PERCENTAGE CHANGE	0.82	-9.65	-0.59	11.87	7.14	6.49	2.56	4.32	7.57	5.44
PRINTING AND PUBLISHING	552.8	545.0	577.8	585.0	639.7	638.3	654.7	668.5	673.4	686.8
PERCENTAGE CHANGE	3.16	-1.41	6.01	1.25	9.35	-0.21	2.56	2.11	0.74	1.99
CHEMICALS	2164.4	2008.8	2052.2	2136.0	2285.3	1698.9	1578.7	1597.4	1687.0	1737.6
PERCENTAGE CHANGE	4.57	-7.19	2.16	4.09	6.99	-25.66	-7.08	1.19	5.61	2.99
RUBBER AND PLASTICS	763.5	680.1	781.6	707.0	814.9	953.3	993.9	1040.1	1097.8	1174.6
PERCENTAGE CHANGE	-0.08	-10.92	14.92	-9.55	15.25	16.99	4.26	4.65	5.54	7.00
LEATHER	411.4	456.6	486.1	369.0	322.1	318.7	238.5	209.7	207.6	205.6
PERCENTAGE CHANGE	-16.76	11.00	6.44	-24.08	-12.71	-1.07	-25.15	-12.07	-1.00	-0.97
OTHER NONDURABLE GOODS	206.9	203.6	200.5	198.0	212.7	224.5	236.8	218.3	216.2	203.3
PERCENTAGE CHANGE	4.36	-1.58	-1.52	-1.26	7.44	5.52	5.47	-7.79	-0.97	-5.96

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 8: TENNESSEE EMPLOYMENT BY SECTOR
(THOUSANDS OF JOBS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
NONAGRICULTURAL JOBS	1777.3	1746.6	1755.4	1703.5	1719.0	1812.0	1867.8	1929.8	2011.6	2065.9
PERCENTAGE CHANGE	2.32	-1.73	0.50	-2.96	0.91	5.41	3.08	3.32	4.24	2.70
MANUFACTURING	524.7	502.1	507.0	467.1	468.6	497.1	492.4	490.5	497.4	508.2
PERCENTAGE CHANGE	-0.24	-4.31	0.96	-7.85	0.31	6.08	-0.94	-0.39	1.42	2.16
DURABLE GOODS	240.8	224.2	228.8	207.9	214.5	237.8	239.6	239.3	244.4	251.2
PERCENTAGE CHANGE	1.07	-6.88	2.05	-9.14	3.17	10.84	0.79	-0.14	2.13	2.77
NONDURABLE GOODS	283.9	277.9	278.1	259.2	254.1	259.3	252.8	251.2	253.0	257.0
PERCENTAGE CHANGE	-1.33	-2.13	0.09	-6.80	-1.99	2.07	-2.52	-0.62	0.73	1.57
CONSTRUCTION	89.2	81.2	76.2	72.2	69.6	78.3	85.6	90.0	95.2	94.4
PERCENTAGE CHANGE	2.27	-9.02	-6.16	-5.26	-3.63	12.54	9.37	5.10	5.80	-0.79
MINING	10.5	10.1	10.0	9.2	7.9	8.0	7.7	7.1	6.8	6.7
PERCENTAGE CHANGE	-3.16	-4.05	-0.58	-8.00	-14.13	1.48	-3.43	-7.64	-5.13	-0.49
TRADE	388.7	379.7	379.9	380.5	389.9	413.3	435.3	452.1	477.2	488.2
PERCENTAGE CHANGE	2.53	-2.31	0.04	0.16	2.47	5.99	5.33	3.85	5.57	2.30
SERVICES	285.4	291.0	304.4	313.1	323.4	344.3	360.2	384.7	408.9	430.0
PERCENTAGE CHANGE	5.43	1.97	4.60	2.86	3.28	6.48	4.60	6.81	6.30	5.15
FINANCE,INSURANCE AND REAL ESTATE.	77.6	78.7	79.6	79.9	81.9	85.9	89.4	95.4	101.4	103.9
PERCENTAGE CHANGE	4.37	1.48	1.09	0.43	2.54	4.81	4.12	6.68	6.32	2.40
TRANS.,COMM.,AND PUBLIC UTILITIES.	87.3	86.6	86.7	84.0	83.7	89.1	93.0	97.6	103.4	108.8
PERCENTAGE CHANGE	4.99	-0.84	0.15	-3.19	-0.39	6.47	4.44	4.92	5.98	5.18
GOVERNMENT	313.9	317.2	311.7	297.5	294.1	296.1	304.2	312.4	321.2	325.6
PERCENTAGE CHANGE	2.70	1.07	-1.74	-4.56	-1.15	0.69	2.72	2.71	2.81	1.39
FEDERAL,CIVILIAN	73.9	76.7	75.0	66.0	61.8	60.1	61.3	61.6	63.4	63.5
PERCENTAGE CHANGE	4.97	3.82	-2.22	-12.02	-6.39	-2.82	2.04	0.46	2.94	0.24
STATE AND LOCAL	240.0	240.5	236.7	231.5	232.3	236.1	242.9	250.8	257.8	262.1
PERCENTAGE CHANGE	2.02	0.22	-1.59	-2.20	0.35	1.63	2.89	3.28	2.78	1.67
TOTAL EMPLOYMENT (THOUS. PERSONS)	1921.0	1928.0	1924.0	1877.0	1930.0	2030.0	2073.0	2106.0	2182.0	2214.0
PERCENTAGE CHANGE	3.73	0.36	-0.21	-2.44	2.82	5.18	2.12	1.59	3.61	1.47
UNEMPLOYMENT (THOUS. PERSONS)	118.0	152.0	192.0	252.0	250.0	190.0	180.0	184.0	154.0	136.0
PERCENTAGE CHANGE	3.51	28.81	26.32	31.25	-0.79	-24.00	-5.26	2.22	-16.30	-11.69
UNEMPLOYMENT RATE (PERCENT)	5.8	7.3	9.1	11.8	11.5	8.6	8.0	8.0	6.6	5.8
CIVILIAN LABOR FORCE (THOUS.PERSONS)	2039.0	2080.0	2116.0	2129.0	2180.0	2220.0	2253.0	2290.0	2336.0	2350.0
PERCENTAGE CHANGE	3.71	2.01	1.73	0.61	2.40	1.83	1.49	1.64	2.01	0.60

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 9: TENNESSEE DURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL DURABLE GOODS	240.8	224.2	228.8	207.9	214.5	237.8	239.6	239.3	244.4	251.2
PERCENTAGE CHANGE	1.07	-6.88	2.05	-9.14	3.17	10.84	0.79	-0.14	2.13	2.77
LUMBER AND WOOD PRODUCTS	21.4	18.7	17.2	15.9	17.2	18.9	18.3	18.6	21.3	20.1
PERCENTAGE CHANGE	7.14	-12.44	-7.97	-7.69	7.97	9.85	-2.87	1.41	14.45	-5.64
FURNITURE AND FIXTURES	24.3	21.5	22.4	20.6	21.5	24.2	24.3	24.5	24.7	26.5
PERCENTAGE CHANGE	-7.15	-11.48	4.31	-7.93	4.49	12.34	0.48	0.65	1.09	6.97
STONE,CLAY AND GLASS	16.8	14.7	14.0	12.4	12.8	14.3	14.3	15.1	15.3	15.1
PERCENTAGE CHANGE	-4.33	-12.44	-4.55	-11.79	4.05	11.15	0.06	5.31	1.33	-1.26
PRIMARY METALS	20.9	19.0	18.9	16.4	15.5	16.2	16.8	16.2	15.7	15.4
PERCENTAGE CHANGE	6.08	-9.20	-0.44	-13.47	-5.24	4.46	3.80	-3.86	-2.89	-2.23
FABRICATED METAL PRODUCTS	35.1	33.8	34.9	33.7	35.5	39.3	39.3	39.1	39.9	42.0
PERCENTAGE CHANGE	2.41	-3.66	3.30	-3.46	5.39	10.43	0.11	-0.47	2.05	5.28
NONELECTRICAL MACHINERY	36.5	35.0	36.4	31.8	31.7	36.7	37.8	37.3	36.4	37.6
PERCENTAGE CHANGE	-0.14	-3.93	3.76	-12.65	-0.08	15.70	2.84	-1.30	-2.44	3.42
ELECTRICAL MACHINERY	41.1	40.2	41.4	37.4	37.5	39.9	37.6	35.2	35.7	38.5
PERCENTAGE CHANGE	-0.18	-2.23	3.13	-9.75	0.40	6.30	-5.72	-6.47	1.56	7.79
TRANSPORTATION EQUIPMENT	26.0	23.2	25.0	22.8	24.4	29.1	31.5	33.0	34.7	34.0
PERCENTAGE CHANGE	3.96	-10.86	7.83	-8.96	6.95	19.34	8.49	4.55	5.36	-1.97
INSTRUMENTS	7.3	7.4	8.2	7.6	8.2	8.9	9.1	9.6	9.3	9.6
PERCENTAGE CHANGE	10.05	1.26	10.48	-7.35	8.81	8.50	2.43	4.92	-2.86	3.13
MISCELLANEOUS DURABLE GOODS	11.5	10.7	10.4	9.4	10.0	10.3	10.5	10.9	11.4	12.4
PERCENTAGE CHANGE	1.69	-6.59	-3.41	-8.92	6.08	3.08	1.77	3.49	4.52	9.08

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 10: TENNESSEE NONDURABLE GOODS MANUFACTURING EMPLOYMENT
(THOUSANDS OF JOBS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL NONDURABLE GOODS	283.9	277.9	278.1	259.2	254.1	259.3	252.8	251.2	253.0	257.0
PERCENTAGE CHANGE	-1.33	-2.13	0.09	-6.80	-1.99	2.07	-2.52	-0.62	0.73	1.57
FOOD	39.5	39.0	38.2	38.1	36.9	37.2	37.6	38.4	38.7	39.5
PERCENTAGE CHANGE	-1.62	-1.27	-1.92	-0.37	-3.02	0.63	1.23	2.10	0.65	2.13
TEXTILES	27.3	26.3	26.4	25.5	25.2	25.6	23.1	23.1	24.0	23.0
PERCENTAGE CHANGE	-5.90	-3.64	0.67	-3.72	-0.95	1.45	-9.58	-0.04	3.79	-3.99
APPAREL	68.3	69.4	69.2	63.7	64.8	68.6	65.4	63.8	64.7	64.9
PERCENTAGE CHANGE	-4.05	1.59	-0.28	-7.90	1.66	5.81	-4.64	-2.45	1.41	0.34
PAPER	18.2	17.7	17.8	16.8	16.9	17.6	17.9	18.3	18.9	19.5
PERCENTAGE CHANGE	4.90	-2.56	0.42	-5.57	0.25	4.45	1.32	2.75	2.86	3.45
PRINTING AND PUBLISHING	26.6	26.9	27.6	27.8	29.1	30.4	31.6	32.9	33.9	35.3
PERCENTAGE CHANGE	2.01	1.03	2.41	0.66	4.83	4.38	4.03	4.06	3.19	3.98
CHEMICALS	58.5	56.6	53.5	48.5	43.0	41.5	40.0	37.9	37.4	38.1
PERCENTAGE CHANGE	1.40	-3.26	-5.36	-9.36	-11.42	-3.53	-3.52	-5.31	-1.25	1.87
RUBBER AND PLASTICS	23.4	20.5	21.6	19.5	21.0	22.8	24.0	24.2	23.9	25.0
PERCENTAGE CHANGE	2.48	-12.58	5.42	-9.59	7.82	8.49	5.19	0.83	-1.17	4.81
LEATHER AND LEATHER PRODUCTS	20.0	19.5	21.5	16.9	14.9	13.3	10.8	10.1	9.3	9.5
PERCENTAGE CHANGE	-5.55	-2.46	10.34	-21.29	-12.20	-10.31	-18.99	-6.32	-8.48	2.79
OTHER NONDURABLE GOODS	2.2	2.1	2.3	2.4	2.3	2.4	2.4	2.5	2.3	2.1
PERCENTAGE CHANGE	-6.81	-4.62	9.27	7.01	-5.52	5.47	0.00	3.11	-6.04	-8.93

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 11: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR
(DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
ALL SECTORS	12084	13275	14422	15363	16198	16880	17580	18402	19140	20096
PERCENTAGE CHANGE	8.63	9.86	8.64	6.53	5.44	4.21	4.15	4.68	4.01	4.99
MANUFACTURING	12738	14003	15256	16389	17546	18149	19061	20518	20788	21740
PERCENTAGE CHANGE	10.03	9.93	8.95	7.43	7.06	3.44	5.02	7.64	1.32	4.58
DURABLE GOODS	12924	14118	15345	16265	17194	19095	20095	22283	21890	22927
PERCENTAGE CHANGE	10.60	9.24	8.69	6.00	5.71	11.05	5.24	10.89	-1.76	4.74
NONDURABLE GOODS	12579	13910	15183	16488	17841	17283	18081	18837	19723	20580
PERCENTAGE CHANGE	9.52	10.58	9.15	8.60	8.21	-3.13	4.62	4.18	4.71	4.34
CONSTRUCTION	12667	13985	15534	16789	16979	17494	18096	19220	20081	21706
PERCENTAGE CHANGE	8.81	10.40	11.07	8.08	1.13	3.03	3.44	6.21	4.48	8.09
MINING	15649	17131	18873	19724	20317	20985	21856	22290	23951	25400
PERCENTAGE CHANGE	11.68	9.47	10.17	4.51	3.01	3.29	4.15	1.99	7.45	6.05
TRADE	9670	10537	11339	11930	12379	12959	13332	13873	14457	15300
PERCENTAGE CHANGE	8.56	8.96	7.61	5.21	3.77	4.69	2.88	4.06	4.21	5.83
SERVICES	10367	11636	12732	13748	14599	15594	16157	16727	17846	18923
PERCENTAGE CHANGE	8.75	12.25	9.41	7.99	6.18	6.82	3.61	3.53	6.69	6.03
FINANCE,INSURANCE AND REAL ESTATE.	12743	14006	15115	16623	17991	18753	20185	21573	22507	22600
PERCENTAGE CHANGE	8.73	9.91	7.92	9.97	8.23	4.23	7.64	6.88	4.33	0.41
TRANS.,COMM.,AND PUBLIC UTIL	17120	18704	20509	21716	23062	23546	24270	24803	25793	26976
PERCENTAGE CHANGE	8.60	9.26	9.65	5.88	6.20	2.10	3.08	2.19	3.99	4.59
GOVERNMENT	12633	13758	14895	15722	16554	17249	18221	18760	19876	20834
PERCENTAGE CHANGE	7.02	8.91	8.26	5.55	5.29	4.20	5.64	2.95	5.95	4.82
FEDERAL,CIVILIAN	18574	19746	21814	23359	25257	26321	27206	27149	28696	30054
PERCENTAGE CHANGE	4.26	6.31	10.47	7.08	8.12	4.21	3.36	-0.21	5.70	4.73
STATE AND LOCAL	10803	11848	12702	13544	14238	14941	15954	16701	17708	18600
PERCENTAGE CHANGE	7.97	9.67	7.21	6.63	5.12	4.94	6.78	4.68	6.03	5.04
AGRICULTURE	3939	3828	5237	6454	6660	7253	8130	6263	8233	9736
PERCENTAGE CHANGE	0.31	-2.81	36.80	23.24	3.19	8.89	12.10	-22.97	31.45	18.26

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL.
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 12: TENNESSEE DURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY BY SECTOR
(DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL DURABLE GOODS	12924	14118	15345	16265	17194	19095	20095	22283	21890	22927
PERCENTAGE CHANGE	10.60	9.24	8.69	6.00	5.71	11.05	5.24	10.89	-1.76	4.74
LUMBER AND WOOD PRODUCTS	9191	10159	11031	11856	12866	13213	13363	14966	13986	14704
PERCENTAGE CHANGE	8.60	10.53	8.59	7.47	8.52	2.69	1.14	12.00	-6.55	5.13
FURNITURE AND FIXTURES	9598	10431	11072	11999	13292	13834	15092	16271	16176	16988
PERCENTAGE CHANGE	9.61	8.68	6.15	8.37	10.78	4.08	9.09	7.82	-0.58	5.02
STONE,CLAY AND GLASS	15454	16721	18369	19365	20821	22705	23651	24991	25210	26123
PERCENTAGE CHANGE	4.11	8.20	9.85	5.42	7.52	9.05	4.17	5.66	0.88	3.62
PRIMARY METALS	15993	18270	19885	20781	21978	22760	22861	26529	25573	26847
PERCENTAGE CHANGE	7.86	14.24	8.84	4.50	5.76	3.56	0.44	16.05	-3.60	4.98
FABRICATED METAL PRODUCTS	13286	14375	14876	14605	14427	20494	22203	24062	22696	23896
PERCENTAGE CHANGE	9.13	8.20	3.49	-1.82	-1.22	42.06	8.34	8.37	-5.68	5.29
NONELECTRICAL MACHINERY	14793	16157	17286	18485	19174	20579	21040	22936	23805	24795
PERCENTAGE CHANGE	16.41	9.22	6.99	6.93	3.73	7.33	2.24	9.01	3.79	4.16
ELECTRICAL MACHINERY	12438	13139	14607	15157	16734	17914	19269	21870	21753	23076
PERCENTAGE CHANGE	14.61	5.64	11.17	3.76	10.41	7.06	7.56	13.50	-0.54	6.08
TRANSPORTATION EQUIPMENT	13756	15247	17133	19159	21232	22338	23051	26560	25773	26776
PERCENTAGE CHANGE	8.06	10.84	12.36	11.83	10.82	5.21	3.19	15.22	-2.97	3.89
INSTRUMENTS	11833	12411	13725	18740	18372	18859	20557	21921	22372	24301
PERCENTAGE CHANGE	9.39	4.89	10.58	36.54	-1.96	2.65	9.01	6.63	2.06	8.62
MISCELLANEOUS DURABLE GOODS	11138	12427	14042	14961	15463	16585	16655	18258	18831	19539
PERCENTAGE CHANGE	8.72	11.58	12.99	6.54	3.35	7.26	0.42	9.63	3.14	3.76

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 13: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY
(DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL NONDURABLE GOODS	12579	13910	15183	16488	17841	17283	18081	18837	19723	20580
PERCENTAGE CHANGE	9.52	10.58	9.15	8.60	8.21	-3.13	4.62	4.18	4.71	4.34
FOOD	13576	14815	16062	17296	18168	19251	20233	20941	21815	22493
PERCENTAGE CHANGE	8.99	9.13	8.41	7.69	5.04	5.96	5.10	3.50	4.18	3.11
TEXTILES	9865	11140	11853	11773	13451	13992	14095	15118	15915	16555
PERCENTAGE CHANGE	7.48	12.93	6.40	-0.68	14.26	4.02	0.74	7.26	5.27	4.02
APPAREL	7778	8225	8892	9117	9833	9934	10081	10780	11099	11350
PERCENTAGE CHANGE	10.80	5.75	8.11	2.52	7.86	1.02	1.48	6.94	2.95	2.27
PAPER	15678	17593	19045	20978	22294	23594	24993	25612	27375	28790
PERCENTAGE CHANGE	7.27	12.21	8.25	10.15	6.28	5.83	5.93	2.47	6.89	5.17
PRINTING AND PUBLISHING	10852	11822	12890	13906	15020	15933	16561	17602	18602	19144
PERCENTAGE CHANGE	7.99	8.93	9.04	7.89	8.01	6.08	3.94	6.29	5.68	2.92
CHEMICALS	18508	21231	24290	28428	32767	26609	28542	30064	31063	32685
PERCENTAGE CHANGE	8.16	14.72	14.41	17.04	15.26	-18.79	7.26	5.33	3.32	5.22
RUBBER AND PLASTICS	15462	17261	18294	19393	20656	22046	21892	21998	23442	24363
PERCENTAGE CHANGE	8.53	11.64	5.98	6.01	6.52	6.73	-0.70	0.48	6.57	3.93
LEATHER AND LEATHER PRODUCTS	9362	10576	11643	11486	12082	12902	12433	11894	13470	14812
PERCENTAGE CHANGE	7.82	12.97	10.09	-1.36	5.20	6.78	-3.63	-4.34	13.25	9.96
OTHER NONDURABLE GOODS	13837	16284	17308	17720	21755	20695	22227	20373	22772	25075
PERCENTAGE CHANGE	14.56	17.68	6.29	2.38	22.77	-4.87	7.40	-8.34	11.77	10.11

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 14: TENNESSEE AVERAGE ANNUAL WAGE AND SALARY BY SECTOR
(1982 DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
ALL SECTORS	15459	15327	15243	15363	15557	15621	15746	16093	15980	16145
PERCENTAGE CHANGE	-0.54	-0.85	-0.55	0.79	1.26	0.41	0.80	2.20	-0.70	1.03
MANUFACTURING	16295	16167	16125	16389	16851	16796	17073	17943	17356	17466
PERCENTAGE CHANGE	0.75	-0.79	-0.26	1.64	2.82	-0.33	1.65	5.10	-3.27	0.64
DURABLE GOODS	16534	16300	16219	16265	16513	17671	17999	19487	18276	18420
PERCENTAGE CHANGE	1.27	-1.41	-0.50	0.28	1.53	7.01	1.86	8.27	-6.22	0.79
NONDURABLE GOODS	16093	16061	16048	16488	17135	15994	16196	16473	16467	16534
PERCENTAGE CHANGE	0.28	-0.20	-0.08	2.74	3.92	-6.65	1.26	1.72	-0.04	0.41
CONSTRUCTION	16205	16147	16419	16789	16307	16190	16209	16808	16765	17439
PERCENTAGE CHANGE	-0.37	-0.36	1.69	2.26	-2.87	-0.72	0.12	3.70	-0.26	4.02
MINING	20020	19779	19948	19724	19513	19421	19576	19493	19996	20407
PERCENTAGE CHANGE	2.25	-1.20	0.86	-1.13	-1.07	-0.47	0.80	-0.43	2.58	2.05
TRADE	12371	12166	11985	11930	11889	11993	11942	12132	12070	12292
PERCENTAGE CHANGE	-0.61	-1.66	-1.49	-0.46	-0.34	0.88	-0.43	1.60	-0.51	1.84
SERVICES	13262	13435	13457	13748	14020	14432	14472	14628	14899	15203
PERCENTAGE CHANGE	-0.43	1.30	0.17	2.17	1.98	2.93	0.28	1.08	1.85	2.04
FINANCE,INSURANCE AND REAL ESTATE.	16302	16171	15977	16623	17278	17355	18079	18866	18791	18157
PERCENTAGE CHANGE	-0.44	-0.80	-1.20	4.05	3.94	0.44	4.18	4.35	-0.40	-3.37
TRANS.,COMM.,AND PUBLIC UTIL	21901	21596	21678	21716	22148	21791	21739	21691	21535	21673
PERCENTAGE CHANGE	-0.57	-1.40	0.38	0.18	1.99	-1.61	-0.24	-0.22	-0.72	0.64
GOVERNMENT	16161	15885	15744	15722	15898	15963	16321	16406	16594	16739
PERCENTAGE CHANGE	-2.02	-1.71	-0.89	-0.14	1.12	0.41	2.24	0.52	1.15	0.87
FEDERAL,CIVILIAN	23761	22798	23056	23359	24256	24359	24369	23742	23958	24146
PERCENTAGE CHANGE	-4.54	-4.06	1.14	1.31	3.84	0.42	0.04	-2.57	0.91	0.78
STATE AND LOCAL	13820	13679	13425	13544	13674	13827	14290	14605	14784	14944
PERCENTAGE CHANGE	-1.14	-1.02	-1.85	0.89	0.96	1.12	3.35	2.20	1.23	1.08
AGRICULTURE	5040	4420	5535	6454	6397	6712	7282	5477	6873	7822
PERCENTAGE CHANGE	-8.15	-12.29	25.23	16.60	-0.89	4.93	8.50	-24.79	25.49	13.81

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 15: TENNESSEE DURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY
(1982 DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL DURABLE GOODS	16534	16300	16219	16265	16513	17671	17999	19487	18276	18420
PERCENTAGE CHANGE	1.27	-1.41	-0.50	0.28	1.53	7.01	1.86	8.27	-6.22	0.79
LUMBER AND WOOD PRODUCTS	11758	11729	11660	11856	12357	12228	11969	13088	11677	11813
PERCENTAGE CHANGE	-0.57	-0.25	-0.59	1.68	4.23	-1.04	-2.11	9.35	-10.78	1.17
FURNITURE AND FIXTURES	12278	12043	11702	11999	12766	12803	13518	14230	13506	13648
PERCENTAGE CHANGE	0.35	-1.92	-2.83	2.53	6.40	0.29	5.58	5.27	-5.09	1.06
STONE,CLAY AND GLASS	19770	19306	19415	19365	19996	21012	21184	21855	21048	20988
PERCENTAGE CHANGE	-4.68	-2.35	0.57	-0.26	3.26	5.08	0.82	3.17	-3.69	-0.28
PRIMARY METALS	20460	21094	21018	20781	21108	21064	20476	23200	21351	21569
PERCENTAGE CHANGE	-1.24	3.10	-0.36	-1.13	1.57	-0.21	-2.79	13.30	-7.97	1.02
FABRICATED METAL PRODUCTS	16997	16597	15723	14605	13855	18966	19887	21043	18949	19199
PERCENTAGE CHANGE	-0.08	-2.35	-5.26	-7.11	-5.13	36.89	4.85	5.81	-9.95	1.32
NONELECTRICAL MACHINERY	18924	18654	18271	18485	18415	19045	18846	20058	19875	19920
PERCENTAGE CHANGE	6.59	-1.43	-2.05	1.17	-0.38	3.42	-1.05	6.43	-0.92	0.23
ELECTRICAL MACHINERY	15912	15170	15439	15157	16071	16579	17260	19126	18161	18540
PERCENTAGE CHANGE	4.94	-4.66	1.78	-1.83	6.03	3.16	4.11	10.81	-5.04	2.08
TRANSPORTATION EQUIPMENT	17598	17604	18109	19159	20391	20673	20647	23227	21517	21512
PERCENTAGE CHANGE	-1.06	0.04	2.87	5.80	6.43	1.38	-0.13	12.50	-7.36	-0.02
INSTRUMENTS	15138	14330	14507	18740	17645	17453	18413	19170	18678	19524
PERCENTAGE CHANGE	0.16	-5.34	1.23	29.18	-5.85	-1.09	5.50	4.11	-2.57	4.53
MISCELLANEOUS DURABLE GOODS	14249	14348	14842	14961	14850	15349	14918	15967	15722	15698
PERCENTAGE CHANGE	-0.46	0.70	3.44	0.80	-0.74	3.36	-2.81	7.03	-1.53	-0.15

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 16: TENNESSEE NONDURABLE GOODS MANUFACTURING
AVERAGE ANNUAL WAGE AND SALARY
(1982 DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL NONDURABLE GOODS	16093	16061	16048	16488	17135	15994	16196	16473	16467	16534
PERCENTAGE CHANGE	0.28	-0.20	-0.08	2.74	3.92	-6.65	1.26	1.72	-0.04	0.41
FOOD	17367	17105	16977	17296	17449	17816	18123	18313	18213	18071
PERCENTAGE CHANGE	-0.21	-1.51	-0.75	1.88	0.88	2.10	1.72	1.05	-0.55	-0.78
TEXTILES	12620	12862	12528	11773	12918	12949	12625	13221	13287	13301
PERCENTAGE CHANGE	-1.59	1.92	-2.60	-6.03	9.73	0.24	-2.50	4.72	0.50	0.10
APPAREL	9950	9496	9399	9117	9444	9193	9029	9427	9266	9119
PERCENTAGE CHANGE	1.45	-4.56	-1.02	-3.00	3.59	-2.65	-1.78	4.41	-1.71	-1.59
PAPER	20057	20312	20130	20978	21411	21835	22387	22398	22856	23130
PERCENTAGE CHANGE	-1.78	1.27	-0.90	4.21	2.07	1.98	2.53	0.05	2.04	1.20
PRINTING AND PUBLISHING	13883	13649	13624	13906	14425	14745	14833	15393	15531	15381
PERCENTAGE CHANGE	-1.12	-1.69	-0.18	2.07	3.73	2.22	0.60	3.78	0.89	-0.96
CHEMICALS	23677	24513	25674	28428	31469	24626	25565	26292	25934	26260
PERCENTAGE CHANGE	-0.97	3.53	4.74	10.73	10.70	-21.75	3.82	2.84	-1.36	1.26
RUBBER AND PLASTICS	19780	19929	19336	19393	19838	20402	19608	19237	19572	19574
PERCENTAGE CHANGE	-0.63	0.76	-2.98	0.29	2.30	2.84	-3.89	-1.89	1.74	0.01
LEATHER AND LEATHER PRODUCTS	11976	12211	12307	11486	11604	11940	11137	10401	11246	11900
PERCENTAGE CHANGE	-1.28	1.96	0.79	-6.67	1.03	2.90	-6.73	-6.60	8.12	5.82
OTHER NONDURABLE GOODS	17702	18801	18294	17720	20894	19152	19909	17817	19012	20146
PERCENTAGE CHANGE	4.89	6.21	-2.70	-3.14	17.91	-8.34	3.95	-10.51	6.71	5.96

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 17: TENNESSEE PERSONAL INCOME BY COMPONENTS

HISTORICAL-DATA

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL PERSONAL INCOME (MIL$)	33508	36958	40872	42970	45745	50362	53637	57801	62523	67243
PERCENTAGE CHANGE	12.22	10.30	10.59	5.13	6.46	10.09	6.50	7.76	8.17	7.55
WAGES AND SALARIES	21477	23187	25316	26171	27844	30586	32837	35511	38503	41515
PERCENTAGE CHANGE	11.15	7.96	9.18	3.38	6.40	9.85	7.36	8.15	8.42	7.82
OTHER LABOR INCOME	2032	2248	2455	2664	2854	3008	3084	3312	3568	3729
PERCENTAGE CHANGE	12.45	10.62	9.20	8.51	7.14	5.40	2.53	7.39	7.74	4.51
PROPRIETORS' INCOME	3496	3418	3505	3441	3600	4580	4733	5239	5876	6285
PERCENTAGE CHANGE	9.31	-2.25	2.57	-1.83	4.62	27.20	3.34	10.71	12.14	6.97
NONFARM	3053	3070	2975	2949	3450	3973	4306	4901	5336	5681
PERCENTAGE CHANGE	7.94	0.54	-3.10	-0.87	17.01	15.15	8.38	13.82	8.88	6.45
FARM	443	348	531	493	150	607	427	338	539	604
PERCENTAGE CHANGE	19.81	-21.50	52.62	-7.21	-69.54	304.33	-29.68	-20.75	59.54	12.05
RENT INTEREST DIVIDENDS	554	4382	5432	5930	6194	6934	7460	7910	8503	9309
PERCENTAGE CHANGE	17.42	23.28	23.96	9.18	4.45	11.93	7.59	6.04	7.50	9.47
TRANSFER PAYMENTS	4814	5800	6534	7189	7708	7936	8541	9134	9722	10478
PERCENTAGE CHANGE	15.40	20.49	12.65	10.03	7.21	2.96	7.63	6.94	6.44	7.77
LESS:PERS. CONT. FOR SOCIAL INS	1463	1606	1879	2012	2014	2214	2493	2729	2959	3336
PERCENTAGE CHANGE	10.96	9.76	17.00	7.05	0.14	9.90	12.59	9.47	8.45	12.75
RESIDENCE ADJUSTMENT	-402	-470	-490	-413	-441	-467	-524	-576	-690	-736
PERCENTAGE CHANGE	15.53	16.93	4.36	-15.76	6.72	6.01	12.15	9.97	19.74	6.63
PER CAPITA PERSONAL INCOME ($)	7392	8029	8811	9209	9752	10652	11252	12039	12875	13737
PERCENTAGE CHANGE	10.46	8.62	9.73	4.53	5.89	9.23	5.63	7.00	6.94	6.69
TOTAL PERSONAL INCOME (MIL 82 $)	42867	42671	43200	42970	43933	46607	48043	50549	52200	54024
PERCENTAGE CHANGE	2.75	-0.46	1.24	-0.53	2.24	6.09	3.08	5.22	3.27	3.49
PER CAPITA PERSONAL INCOME (82 $)	9457	9270	9312	9209	9365	9858	10078	10529	10750	11037
PERCENTAGE CHANGE	1.14	-1.97	0.46	-1.11	1.70	5.26	2.24	4.47	2.10	2.67
TAX AND NONTAX PAYMENTS (MIL $)	4255	4783	5380	5596	5921	6125	6936	7088	7884	8132
PERCENTAGE CHANGE	12.59	12.41	12.49	4.02	5.79	3.46	13.24	2.19	11.23	3.15
DISPOSABLE PERSONAL INCOME (MIL $)	29253	32175	35492	37373	39824	44235	46745	50435	54649	59111
PERCENTAGE CHANGE	12.17	9.99	10.31	5.30	6.56	11.08	5.67	7.89	8.36	8.16
PER CAPITA DISPOSABLE INCOME ($)	6453	6990	7651	8010	8489	9356	9806	10505	11254	12076
PERCENTAGE CHANGE	10.41	8.32	9.45	4.69	5.99	10.21	4.81	7.13	7.13	7.30
DISPOSABLE INCOME (MIL 82 $)	37424	37148	37513	37373	38247	40937	41869	44106	45626	47491
PERCENTAGE CHANGE	2.70	-0.74	0.98	-0.38	2.34	7.03	2.28	5.34	3.45	4.09
PER CAPITA DISPOSABLE INCOME (82 $)	8256	8070	8087	8010	8153	8658	8783	9187	9396	9702
PERCENTAGE CHANGE	1.09	-2.24	0.20	-0.95	1.79	6.20	1.44	4.60	2.27	3.26

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 18: TENNESSEE SALES
(MILLIONS OF CURRENT DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL	21352	20177	23490	24604	25097	28966	31817	34309	36386	38538
PERCENTAGE CHANGE	11.41	-5.50	16.42	4.74	2.00	15.42	9.84	7.83	6.05	5.91
AUTO DEALERS	2423	1759	1937	2027	2426	2925	3423	3961	4323	4536
PERCENTAGE CHANGE	-1.43	-27.42	10.12	4.64	19.70	20.57	17.03	15.72	9.13	4.93
PURCHASES FROM MANUFACTURES	1462	1676	1704	1721	1909	2389	2670	2788	2547	2757
PERCENTAGE CHANGE	16.24	14.63	1.66	1.01	10.94	25.13	11.78	4.41	-8.64	8.25
MISC. DURABLE GOODS	4435	3488	3665	3554	3936	4758	5314	5804	6160	6335
PERCENTAGE CHANGE	3.58	-21.34	5.05	-3.01	10.74	20.88	11.70	9.20	6.14	2.84
EATING AND DRINKING PLACES	1431	1459	1649	1830	1803	2061	2260	2504	2746	2942
PERCENTAGE CHANGE	13.18	1.95	13.06	10.95	-1.48	14.34	9.61	10.82	9.68	7.12
FOOD STORES	3921	4138	4602	4759	4565	4827	5087	5130	5512	5695
PERCENTAGE CHANGE	13.18	5.53	11.21	3.41	-4.07	5.72	5.40	0.84	7.45	3.31
LIQUOR STORES	215	221	238	240	228	229	243	277	253	251
PERCENTAGE CHANGE	15.56	2.97	7.49	0.73	-4.85	0.51	6.15	13.65	-8.63	-0.47
HOTELS AND MOTELS	374	419	491	612	508	583	641	753	804	883
PERCENTAGE CHANGE	10.30	12.17	17.30	24.50	-16.98	14.79	9.87	17.50	6.78	9.89
OTHER RETAIL AND SERVICE	4415	4068	5874	6388	6303	7312	7994	8683	9431	10095
PERCENTAGE CHANGE	21.44	-7.87	44.41	8.74	-1.33	16.02	9.33	8.61	8.61	7.05
MISC. NONDURABLE GOODS	1887	1990	2209	2347	2360	2768	2924	3073	3151	3378
PERCENTAGE CHANGE	13.12	5.45	11.02	6.25	0.57	17.25	5.64	5.10	2.54	7.22
TRANSPORTATION,COMMUNICATION	789	959	1121	1126	1058	1114	1260	1338	1460	1665
PERCENTAGE CHANGE	29.15	21.48	16.93	0.47	-6.03	5.27	13.11	6.15	9.18	14.05
MOTOR VEHICLE REGISTRATIONS	2995	3271	3533	3381	3537	3569	3754	3932	4027	4168
PERCENTAGE CHANGE	2.89	9.21	8.01	-4.30	4.61	0.90	5.19	4.75	2.40	3.52

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 19: TENNESSEE SALES
(MILLIONS OF 1982 DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
TOTAL	27316	23296	24829	24604	24103	26806	28499	30004	30379	30962
PERCENTAGE CHANGE	2.00	-14.72	6.58	-0.91	-2.04	11.22	6.31	5.28	1.25	1.92
AUTO DEALERS	3100	2031	2047	2027	2330	2707	3066	3464	3609	3644
PERCENTAGE CHANGE	-9.75	-34.50	0.81	-1.00	14.96	16.18	13.27	12.98	4.19	0.98
PURCHASES FROM MANUFACTURES	1870	1935	1801	1721	1834	2211	2392	2438	2127	2215
PERCENTAGE CHANGE	6.43	3.45	-6.93	-4.44	6.54	20.57	8.18	1.95	-12.78	4.17
MISC. DURABLE GOODS	5673	4028	3873	3554	3780	4403	4760	5075	5143	5089
PERCENTAGE CHANGE	-5.16	-29.01	-3.83	-8.24	6.35	16.48	8.11	6.62	1.33	-1.04
EATING AND DRINKING PLACES	1830	1684	1743	1830	1731	1908	2024	2190	2293	2364
PERCENTAGE CHANGE	3.63	-7.99	3.50	4.97	-5.38	10.18	6.09	8.20	4.71	3.09
FOOD STORES	5017	4778	4864	4759	4385	4467	4557	4486	4602	4575
PERCENTAGE CHANGE	3.63	-4.76	1.81	-2.16	-7.87	1.88	2.01	-1.55	2.58	-0.59
LIQUOR STORES	275	256	252	240	219	212	218	242	211	202
PERCENTAGE CHANGE	5.81	-7.07	-1.60	-4.70	-8.62	-3.15	2.74	10.96	-12.77	-4.22
HOTELS AND MOTELS	478	484	519	612	488	540	574	658	671	710
PERCENTAGE CHANGE	0.99	1.23	7.38	17.79	-20.27	10.61	6.34	14.72	1.94	5.75
OTHER RETAIL AND SERVICE	5648	4697	6209	6388	6053	6767	7161	7593	7873	8111
PERCENTAGE CHANGE	11.19	-16.85	32.20	2.88	-5.24	11.80	5.82	6.04	3.69	3.01
MISC. NONDURABLE GOODS	2414	2297	2335	2347	2267	2561	2619	2687	2630	2714
PERCENTAGE CHANGE	3.57	-4.83	1.63	0.52	-3.41	12.98	2.25	2.61	-2.11	3.18
TRANSPORTATION,COMMUNICATION	1010	1107	1185	1126	1016	1031	1129	1170	1219	1338
PERCENTAGE CHANGE	18.25	9.63	7.05	-4.95	-9.76	1.44	9.47	3.64	4.23	9.75

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989

TABLE 20: TENNESSEE ENERGY CONSUMPTION - SELECTED CATEGORIES

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
ELECTRICITY (MIL. KWH).....	61433	62369	60339	56015	58314	61078	61657	64548	65858	68941
PERCENTAGE CHANGE.....	0.45	1.52	-3.25	-7.17	4.10	4.74	0.95	4.69	2.03	4.68
RESIDENTIAL.....	24466	25739	24154	23794	24277	25189	24959	26452	27202	28324
PERCENTAGE CHANGE.....	-5.31	5.20	-6.16	-1.49	2.03	3.76	-0.91	5.98	2.84	4.12
COMMERCIAL.....	4123	4372	4384	4424	4668	4987	5010	5427	6068	5649
PERCENTAGE CHANGE.....	-2.91	6.05	0.27	0.91	5.52	6.83	0.46	8.33	11.81	-6.91
INDUSTRIAL.....	21376	21187	21201	20857	21451	22836	23471	24320	25117	26789
PERCENTAGE CHANGE.....	2.93	-0.88	0.07	-1.62	2.85	6.46	2.78	3.62	3.28	6.66
DIRECTLY SERVED COMM AND IND.....	11468	11071	10600	6940	7918	8066	8217	8349	7471	8179
PERCENTAGE CHANGE.....	11.27	-3.46	-4.25	-34.53	14.09	1.87	1.87	1.61	-10.52	9.48
GASOLINE (MIL. GAL.).....	2472	2377	2339	2315	2293	2458	2496	2594	2693	2827
PERCENTAGE CHANGE.....	-3.31	-3.85	-1.61	-1.01	-0.97	7.20	1.53	3.93	3.82	4.99

SOURCE: ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH, UT-KNOXVILLE.

CONTROL SOLUTION: NOVEMBER 1989
TABLE 21: TENNESSEE FARM AGRICULTURAL OUTPUT
(MILLIONS OF DOLLARS)

	HISTORICAL-DATA									
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
CASH RECEIPTS	1796.3	1901.5	1933.1	1949.2	1803.4	2118.1	2028.9	1866.7	1983.5	2045.7
PERCENTAGE CHANGE	12.68	5.86	1.66	0.83	-7.48	17.45	-4.21	-7.99	6.26	3.13
CROPS	842.1	996.7	1080.6	1051.0	896.9	1064.4	1028.8	825.7	873.7	965.3
PERCENTAGE CHANGE	16.51	18.36	8.42	-2.74	-14.66	18.67	-3.34	-19.74	5.82	10.48
MEAT ANIMALS	607.5	509.1	427.1	481.6	503.7	647.2	602.6	623.5	712.0	680.6
PERCENTAGE CHANGE	7.23	-16.20	-16.12	12.76	4.60	28.49	-6.90	3.47	14.18	-4.40
DAIRY PRODUCTS	244.1	287.3	308.5	304.6	295.3	275.9	281.9	274.6	273.1	266.1
PERCENTAGE CHANGE	13.66	17.70	7.40	-1.27	-3.07	-6.57	2.17	-2.57	-0.55	-2.56
POULTRY AND EGGS	102.6	108.4	116.9	112.0	107.5	130.6	115.7	142.9	124.8	133.7
PERCENTAGE CHANGE	14.00	5.64	7.84	-4.19	-4.03	21.48	-11.43	23.57	-12.71	7.15
EXPENSES	586.3	690.5	426.1	434.2	701.4	584.1	633.9	682.7	649.0	653.7
PERCENTAGE CHANGE	1.77	17.77	-38.29	1.90	61.54	-16.73	8.53	7.70	-4.93	0.72
GROSS OUTPUT	1210.0	1211.0	1507.0	1515.0	1102.0	1534.0	1395.0	1184.0	1334.5	1392.0
PERCENTAGE CHANGE	18.86	0.08	24.44	0.53	-27.26	39.20	-9.06	-15.13	12.71	4.31
GROSS OUTPUT (MIL 82 $)	1088.1	1186.1	1431.1	1515.0	1139.6	1352.7	1470.0	1314.1	1450.5	1394.8
PERCENTAGE CHANGE	5.61	9.00	20.66	5.86	-24.78	18.70	8.67	-10.60	10.38	-3.84
FARM WAGE AND SALARY JOBS	23.7	25.2	17.9	16.5	15.4	13.8	12.2	15.8	12.8	11.5
PERCENTAGE CHANGE	8.70	6.20	-28.98	-8.04	-6.74	-10.19	-11.24	29.16	-19.31	-10.21

SOURCE:ANNUAL TENNESSEE ECONOMETRIC MODEL,
CENTER FOR BUSINESS AND ECONOMIC RESEARCH,UT-KNOXVILLE.